THE ONLINE WORLD

By Odd De Presno

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SHAREWARE BOOK

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* THE ONLINE WORLD *
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Version 1.1 - September 1993

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PREFACE

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This is the ASCII online distribution of the Online World. It deals with the practical aspects of using the rapidly growing global online information resource.

The book is distributed in a form that is designed to be easily accessible with the maximum range of computers, printer types, and search programs. Also, it has been designed to be compatible with electronic reading devices for the blind. Therefore, many frills (such as fancy formatting, extraneous characters or tags) have been omitted.

The main subject of the book is what you can get out of the online resource.

Expect an outline, not a comprehensive list or directory of all available offerings. This book explores selected applications across network and service boundaries, to show how these needs may be satisfied.

In the process, it gives access information for a large number of specific online offerings.

The applications range from entertainment and the bizarre to databases and special services for professionals and organizations.

You are not expected to live in the United States or in Norway. Emphasis is on major international offerings available through services and networks like the Internet, BITNET, CompuServe, Echo, FidoNet, Usenet, Dialcom, Dow Jones/News Retrieval, MCI, NewsNet and UUCP. These services can be accessed from almost anywhere.

Talking about the Internet, we do not expect that it will be easy for you to get full access. We assume that most people can get access to this network by electronic mail only.

I wrote The Online World for parents and youth, teachers, students, business people, social workers, psychologists, young, old, for anybody interested in knowing a bit more about our current "Global Village."

You can read it like a novel, to get an idea of what is going on. It can be used as a practical guide book to online data bases and news sources, or as a book of reference.

You need not be a computer expert or an experienced "onliner" to find it useful.

While not being a textbook on data communications, it contains much information to help novices get started. For an introduction to telecommunications, check out appendix 2 and 3 before continuing with Chapter 1.

Before you start, one word of warning. New online offerings are born each day, while others are being closed down. Chances are that most services in this book will still be around when you read it, but I will need to update the text regularly. Therefore, all feedback is welcomed with thanks.

Please do also tell me what you like, what you don't, and what you feel I may have missed -- or have gotten hopelessly wrong. Send by electronic mail to me at opresno@extern.uio.no .

This book is not free

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If you like the book, please become a registered reader. Your contribution will support further research and development of the text.

The important benefit of registering is that you will receive the latest version of the book on diskette (MS-DOS only). This will allow you to have current information on your hard disk that you can search whenever you want to.

The online world is dynamic. Services and offerings come and go. So read appendix 8 to find out how to stay updated.

The registered shareware version of The Online World including shipping and handling is

NOK 105.00	for payment by credit card (around US$ 15.00)
US$ 20.00	for all other types of payment (check or SWIFT bank transfer)

As an alternative, you can also register for six updates of the book during one year. The updates will be mailed you on computer diskette:

US$60.00	for all types of payment

The special rates for organizations to make the text available to employees etc. over a network are explained in appendix 8.

Please note: As I do not receive any renumeration from vendors of shareware disks, you must register your copy to have a legal license for use of the book beyond an evaluation period.

Please give to others

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The Online World book is regularly being updated. Information about where to get the latest version of the book can be retrieved from TOW, a mailing list set up to support the project. For information, send electronic mail to LISTSERV@vm1.nodak.edu (LISTSERV@NDSUVM1 on BITNET) containing the command "GET TOW MASTER".

How to read the book

You may read the book using any ASCII viewing or text searching program. My private favorites are:

LIST - Shareware MS-DOS file viewing program,

LOOKFOR - Shareware boolean text search program.

Print versions of The Online World

The Online World does not cover any specific area of the world. Local versions will be printed and published in several countries through joint venture partners. These versions of the book will be adapted to local conditions, and contain many local examples and references.

The following local version of the book is available:

"Ut i verden fra egen skjerm," Norwegian text, Dataforlaget A/S, 1992. 220 pages. Phone: +47 22 63 61 62. Fax: +47 22 63 60 09. Price: NOK 245,-. ISBN: 82-90628-67-6.

Local language versions of the book are due be published soon by partners in Denmark and Germany. For information, please contact:

Claus Berg (Denmark) at Claus_Berg@SKOLE-KOM.UNI-C.DK
Publisher: Teknisk Forlag A/S, Skelbaekgade 4, 1780 Kbh.V., Denmark. Fax: +45 31 21 09 83.

Dr. Karl Sarnow (Germany) at karl@dadoka.h.ni.schule.de
Publisher: Verlag Heintz Heise GmbH & Co KB, Helstorfer Strasse 7, D-3000 Hannover 61, Germany.
Fax: +49-511-53 52-129.

Do you want to be a partner?

If you are interested in becoming the author of a local language version of the book in your country, please write me at opresno@extern.uio.no to discuss the possibility of a joint-venture.

Saltrod (Norway), September 1, 1993

Yours,

Odd de Presno

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Chapter 1: Going online will make me rich, right?

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The number of services is enormous. It takes time to find the truly interesting stuff.
- Knowledge is power.
- A large personal network gives you a punch.
- The value of information, and of having a good time.

Knowledge is Power

My wife has a rare and dangerous kidney disease. One day her doctor joined us on an online research session to look for experiences and advice in other countries.

We sat down in my office in Norway. I turned on my personal computer and started a communications program.

After some keypresses, we could hear the attached modem dial the number of CompuServe, a North American information utility. (A modem is a piece of equipment that converts computer signals to and from sound codes, so that data can be sent by phone.)

It took just a few seconds to make the connection. Soon, a greeting scrolled over our screen, followed by a menu of available choices.

> For an introduction to practical telecommunications, check out appendix 2 and 3. Appendix 1 lists major services mentioned in this book.

We selected "Health" and the "Data Base for Rare diseases." This gave the address of an American foundation for "cysts in kidneys," which is the name of her disease. My wife made contact, and has since received regular reports of research results and experiences gained in the field.

We sent an open request for help to an electronic forum for doctors. The result was several useful responses. We searched a magazine data base for medical articles containing the key word "kidney." Paper copies of the most interesting finds arrived by mail after a few days. My wife gave them to her hospital doctor as background reading.

Kenya Saikawa is paralyzed. He communicates with his PC and modem using light key strokes and Morse code. Online communications allows Kenya to be in regular contact with people outside the walls of his Tokyo hospital.

We met online in a "Handicap Club" on a computer center called TWICS in Tokyo. He was there to exchange experiences with others with disabilities. The club is a personal support group for those

in need of help.

CompuServe's Cancer Forum has a similar function. "It's a blessing that I can visit here 24 hours a day," one visitor said. "When I'm unable to sleep at night, I often sit down by the PC to read and write messages to others."

The forum is like a family. The file library is full of information about cancer. Members can just go in there and pick up whatever they want to read.

Dave Hughes from Old Colorado Springs, Colorado in the United States has had a long career as a professional soldier. He has fought in places like the Yalue river in Korea and Vietnam's jungle. When he retired, he became a political online force.

"I'm using the new tools of the individual mind to change the world," he says. Native American Indians are among those, who have benefited from Dave's energy and knowledge. He has helped them show their culture to the outside world in a graphical form.

Vladimir Makarenkov from the Crimea in the Ukraine is manager in a company called VINKO. In early 1993, he distributed an offer of partnership with foreign companies through the mailing list E-EUROPE. VINKO is into aluminium processing. He wrote:

"From our own production we can offer some one metals and aniline dye for cotton, viscose, wool, silk, leather. We are interested in deliveries of chemical production (gamma acid, H-acid) and not quickly deteriorating foods (food concentrates, canned food etc)."

George Pavlov is Planning and Reporting manager at an American computer manufacturer. Daily, he logs on to online services to monitor industry product announcements and daily news from several electronic sources. It helps him stay ahead of rapid technological developments.

Semafor A/S in Arendal, Norway, produces modems and other types of telecommunications equipment. They operate an electronic bulletin board for customers, users and prospects. Anybody can call in to get information about products and offerings. If they need help, they can leave a message to Semafor A/S day and night. A response will be waiting for them, when they call back.

Eduardo Salom heads Software Plus SA in Buenos Aires, Argentina. He discovered the online world in 1988, and uses it to find information that can help his company develop industrial applications.

The Norwegian civil engineer Kai Oestreng regularly calls specialized online computer clubs to discuss his computational needs, fetch programs and monitor developments.

Mary Lou Rebelo was born in southern Brazil. Today, she is married to a Japanese and lives in Tokyo. She teaches Portuguese and works as a translator. The modem enables her to keep in touch with others around the world interested in Portuguese and Spanish language and culture.

Mike Wright teaches at St. Andrew's College in Grahamstown, South Africa. He integrates the online world in his teaching to motivate his students. His classes are involved in international projects with schools all over the globe.

In August 1991, the "Old Stalinists" made a coup d'etat in the Soviet Union. The news media were silenced, but they forgot the country's many bulletin boards. Early one morning, a foreign caller picked up the following messages from a Moscow BBS:

From: Valery Koulkov
To: All Msg #560, 00:42am
20-Aug-91

Subject: Moscow, August 19, 23:00

Some news from the square news RSFSR white building, 23:00. Local inhabitants are very welcome for the people guarding 'white building', they carry food and some garments to the square. Approx. 8 tanks stand by the house under the RSFSR flags! There is an information that 'white house' is surrounded by the soldiers from Vysshee Desantnoye uchilische from Ryazan. The people are not so desperate than some hours ago. There are more and more people.

From: Stas Stas
To: Alexey Zabrodin Msg #562, 02:53pm 20-Aug-91
Subject: Russia In Agency news

I have sent two files RIA4.txt & ria5.txt
It's msgs of Russia Information Agency
Spread it as much as you can!!!

From: Andrew Brown
To: All Msg #563, 06:31pm 20-Aug-91
Subject: What's happening?

I am a journalist on the London Daily newspaper *The Independent*, and I am trying to discover whether this technology, like fax machines, is being used for independent communication now that the censors have clamped down on everything else.

Can people describe what is happening, and what they see? Something similar was done on Compuserve during the Gulf War, by subscribers who where in Israel and were able to describe Scud missile attacks without censorship.

Andrew Brown

Select: 564
From: Valery Koulkov
To: All Msg #564, 00:52am 21-Aug-91
Subject: Moscow events

There is shooting near the American embassy and RSFSR state building. Informer said (by phone) that he saw several victims (shot and killed under the tanks. there is fire near the RSFSR building. Moscow, August 21, 1:15 am

Telecommunications played a role in this historic event. While CNN televised the coup, it was not the images, but the words of men like Yeltsin that held sway for Russian citizens.

Within hours of Yeltsin's statement in defiance of the coup leaders, handbills reproducing his statement papered the walls of the Moscow metro and Leningrad houses.

You can!

Online communication is not just for the privileged or those with a special interest in computers. It is for you, me, everybody.

There is much to learn in the "online land," and the medium is fascinating. It makes learning fun. You can learn about how to use your computer, about your profession, other people's views about whatever, and more. Often, you will find reports about experiences and know-how that it is hard or impractical to get in other ways.

Some users go online to learn how to do things better. Teachers want to give their students a better and more motivating learning environment. Architects, engineers and companies want increased competitiveness and sales. They seek timely information about competitors, technologies and tools, partners and trends.

You can take a Masters Degree in Business Administration while sitting in front of your computer at home. You can join online seminars arranged by local or foreign educational institutes. You can even study at night, when the rest of your family has calmed down.

Some build their own educational programs supported by data bases, online forums and associations of various kinds.

You may feel helpless when in hospital, or when visiting your doctor. Knowledge about your disease will make you better equipped to handle the situation. The online resource is just keypresses away, and knowledge is power.

To get this power, you'll need to know what you can get from the online world. This book is filled with examples of what is available, and practical tips about how to use the offerings.

A large personal network gives strength

Most of us belong to one or several networks. They consist of persons that you can call on whenever you need help. Your network may be private, like in your family. You may be member of various associations, or be part of a group of people with common interests within a company or organization.

The modem allows you to be part of more personal networks than you can possibly cope with in the "real world." Besides, it's much easier to develop personal networks in the online world.

We have used words like "clubs" and "associations." By this we mean groups of people interested in helping You and in participating in what You happen to be interested in.

Today's communications technology lets us participate in networks in other countries at a very low cost. Many describe it as participation "beyond time and space."

Write a message and send it to a person in your network. It arrives in his/her "mailbox" within minutes (sometimes seconds) and stays there until the recipient wants to read it. This built-in ability to send messages to other people's electronic mailboxes reduces the power that time and geographical distances have over our lives.

A friend in a remote country gets out of bed nine hours after you, but keeps going well into what, for you, is the next morning. No problem. You can send letters when you're awake and receive replies when you're asleep.

You can pick up and read your friend's messages the next day or whenever you feel like doing it. That is how two people as far apart as Arendal, Norway and Beijing, China could be involved in the development of this book.

Sometimes "real time" discussions are important. Consider the following example. CompuServe has a Diabetes Forum. You can call there any time, day or night, seven days a week. Whenever you feel like it. You will always find someone to chat with who understands and shares your problems.

Real-time chatting may become expensive, but you are free to

decide your level of involvement. If you think that $10 spent is enough, then just stop there.

What is the point?

Thousands of commercial and noncommercial online services offer over 5,000 online databases. These infobases are repositories of electronic information. They contain full-text and reference books, magazines, newspapers, radio and TV shows, reports, and more.

In 1992, BiblioData (USA) found that around 4,000 titles (i.e., magazines, newspapers, etc.) were available online in full-text. You will find facts and figures about almost anything in the online world.

The world has over 100,000 public bulletin board systems (1993). Most are small information centers, running on personal computers using a simple computer program and modems. People call in to read messages and information, retrieve free software, or just to have a good time.

Most BBSes are free. Some charge a small annual fee. The largest board has 213 telephone lines, seven gigabytes of storage for letters, conferences, computer programs, and more (1993).

Mind you, 7 gigabytes is a lot. It is equivalent to more than 7,000,000,000 characters, or a whopping 12,000 copies of this book!

The entrepreneur sees the online world as a new, profitable playground. Many of them have made it their profession to search for information for others, and they earn a good living doing so.

Others advertise and sell products and services by modem. Some set up their own online services to sell knowledge and know-how, be it of aqua culture, wine production, marketing, or about the petroleum offshore market.

In business, it pays to be one step ahead of the competition. Early warnings of customers' needs, competitors' moves, and emerging opportunities can be turned into fortunes. It can reduce potential losses and help develop businesses in more profitable directions.

Turn this to your advantage. Build your own early warning system that monitors online information sources and networks.

Have fun

The online world has an abundance of joke clubs, dramatic adventure games with multiple players, and large archives filled with computer game software. You can transfer these programs to your personal computer and be ready to play in minutes.

Others may feel more entertained when things get "interesting." Surely, those calling Moscow in August 1991 for news about the coup must have had a strange sensation in the stomach.

Some online users react quickly when dramatic events occur. They go online to read the news directly from the wires, from Associated Press, TASS, Reuters, Xinhua Press, Kyodo News and others.

Usually, the online news is coming directly to you from the journalists' keyboards. Often, you heard it here first.

Other people prefer to socialize. They meet in online "meeting places" to debate everything from Africa and the administration of kindergartens to poetry, LISP programming and compressed video for multimedia applications.

It has been claimed that increased use of online networking in a country can effect social changes within politics, economics, communication and science. It can support democratic tendencies,

the transition to a market economy, the formation and support of businesses, the spreading of interpersonal and mass communication, the forging of invisible colleges among scientists, and breaking-up of traditional and closed information systems developed in some societies.

No matter whether your application is useful or just a pastime, online services queue up to help give your life a better content.

Some people fear that language might be a problem, and in particular if English is not their first language. Don't worry. You are in the driver's seat. If something is hard to understand, just log off to study the difficult text. Take your time. Nobody is watching.

Will you being member of the online world make you rich? Probably not. On the other hand, it most certainly provides the opportunities to help you achieve such a goal, no matter how you define the word "rich."

Chapter 2: The online world

This chapter is about the structure and contents of the online world. You will read about Bulletin Board systems, discussion lists, conferencing systems, online data bases, packet data services, and network services like FidoNet, i-Com, Infonet, and the Internet.

From papyrus to bits and bytes

Around 1500 B.C., the world's first library was established in Tell el Amaran, Egypt. Eight hundred years later, the first public library opened in Athens, Greece.

It took another two thousand years for the computer to be invented. The first known mention of a possible future online information service was printed in the Atlantic Monthly magazine in 1945.

Nine years later, the Naval Ordinance Test Station opened their online search service in California (U.S.A.) The first full-text database came six years later. MEDLARS was a bibliographic database containing references to medical literature. From now on, things started to roll at a faster pace:

* In 1972, DIALOG (U.S.A.) opened their Educational Resources Information Center and National Technical Information Service databases for online searching. (Appendix 1 contains information about the major online services referred to in this book.)
* In 1974, Dow Jones News/Retrieval (U.S.A.) launched a financial information service for stock brokers.
* In 1978, the first bulletin board was put into operation in Chicago (U.S.A.).
* CompuServe (U.S.A.) launched a service for home users in 1979.

The online world was born in the United States. Little happened in the rest of the world until the late 1980s. American companies and users still dominate, but they are no longer alone.

Today, we can access over 5,000 public databases. They are available from more than 500,000 online systems ("host computers") all over the world.

With so many online services, it is difficult to find our way through the maze of offerings. This book therefore starts with a map of the online world.

The structure and contents of the online world

The online world can be described as a cake with multiple layers, where the information sources are the bottom layer. You - the user - are the marzipan figure on the top. The online world contains the following tiers:

(1) Database producers and information providers
(2) Online service companies
(3) Gateways and networks
(4) The services
(5) The user interface
(6) The data transport services
(7) The User.

1. Database producers and information providers.

I have a bulletin board system in Norway (at +47 370 31378). My BBS is running on a small personal computer, and offers shareware and public domain software.

Anybody can call my board to have programs transferred to their personal computers by modem (see appendix 2 for how to do this).

When you call this BBS to "download" a free program for to your computer's hard disk, don't expect to find one made by me. I don't write programs. All available programs have been written by others.

When you call Data-Star in Switzerland, or CompuServe in the U.S. to read news, you may find some stories authored by these companies. Most of their news, however, are written by others.

InfoPro Technologies delivers Russian scientific and technical articles from "Referativnyi Zurnal" through online services like Orbit, Pergamon and BRS. InfoPro is not the originator. The text has been prepared by VINITI (the Institute for scientific and technical information of the xUSSR).

My BBS (the "Saltrod Horror Show"), Data-Star, NIFTY-Serve, Orbit, Pergamon, BRS, and CompuServe are online services. We call those who have provided the news and information on these services for information providers or database producers.

The American news agency Associated Press is an information provider. They write the news, and sell them to online services like Dialog, CompuServe, Nexis and NewsNet. These online services let you read the news by modem.

The information providers sell the right to distribute their news. Your news reading charges may be imbedded in the online service's standard access rates. Some services will ask you to pay a surcharge when reading news.

Most subscribers pay US$12.80 per hour (1993) to use CompuServe at 2400 bits per second (bps). At this speed, you typically receive around 240 characters of news per second. If you access at higher speeds, you will have to pay more.

CompuServe pays Associated Press part of what they earn each time you read their news. There is no surcharge for reading AP news on this service.

Others charge more. To read Mid-East Business Digest through NewsNet, you pay a surcharge of US$72.00 per hour at 2400 bps

(1993). Scanning newsletter headlines and conducting keyword searches are cheaper. You pay the the basic connect charge, which is US$90.00 per hour at this speed.

Thus, your total cost for reading Mid-East Business Digest amounts to US$2.70 per minute.

CompuServe's database service IQuest lets you search NewsNet through a gateway to find and read the same articles. Here, reading will only set you back US$21.50/hour (provided the articles are among the first hits in your search).

Many information providers also distribute information through grassroots bulletin boards. The Newsbytes News Network and the USA Today newsletter services (also in full text on Dialog and Nexis) are two examples.

The rates for reading the same article may therefore differ considerably depending on what online service you are using. If you are a regular reader, shop around for the best price.

Information providers may have subcontractors. The Ziff-Davis service Computer Database Plus, a database with full-text articles from magazines like Datamation and Wall Street Computer Review, depends on them.

Datamation pays journalists to write the articles. Ziff-Davis pays Datamation for the right to distribute the articles to CompuServe's subscribers. CompuServe pays Ziff-Davis part of what you pay when reading the text.

2. Online services

The term "online services" refers to information services provided by computer systems, large or small, to owners of personal computers with modems.

What is offered, differ by system. It may include access to libraries of programs and data, electronic mail, online shopping malls, discussion forums, hardware and software vendor support, games and entertainment, financial data, stock market quotes, and research capabilities.

You do not always need a phone and a modem when "dialing up." Some services can be accessed through leased phone lines, amateur radio, or other methods.

Check out appendix 1 for a list of major services mentioned in this book, with addresses, phone numbers, and a short description.

CompuServe (U.S.A.), Twics (Japan), and Orbit (England) are commercial. They charge you for using their services.

Some online services are priced like magazines and newspapers with a flat subscription rate for basic services. You can use this part of a service as much as you like within a given period. GEnie, CompuServe, BIX, America Online, and Delphi are among those offering such pricing options.

Other online services charge for 'connect time'. They have a rate per hour or minute.

MCI Mail uses "no cure, no pay." You only pay to send or read mail. To check for unread letters in your mailbox is free.

There are all kinds of creative pricing schemes. Some services have different rates for access during the day, night and weekends. Others have different rates for users living far away. Sometimes the remote subscriber pays more, in other cases less than ordinary subscribers.

Still, most online services are free. This is particularly true for the over hundred thousand bulletin board systems around the world. The owners of these services often regard them as a hobby, a public service, a necessary marketing expense, or do it for other

reasons.

The cost of setting up and operating a bulletin board system is low. Consequently, the BBS systems are as varied as the people who run them. Each BBS has its own character.

My BBS is also free. I consider it an online appendix to this book and the articles I write.

National Geographic BBS in Washington, D.C., U.S.A. (tel.: +1-202-775-6738) is run by the magazine of the same name. This board is also free. They regard it as a part of their marketing strategy. It provides them with input to the editors, and it is an easy way of maintaining contacts with schools.

Semaforum BBS in Norway is run by a company. Its purpose is customer support and to give information to prospective customers. The cost is a marketing expense.

Some large, international online services on the Internet, BITNET, and UUCP are almost free. They address research and educational institutions and are financed by public funds. These services are now being made available to other users at very moderate rates.

Some users fear that using online services will increase their telephone costs dramatically, and especially when using services in other countries. This is often unjustified. Read chapter 13 and 15 for tips about how to keep your communications costs down.

3. Gateways and networks

CompuServe users select the Computer Database Plus from a menu. This prompts CompuServe to dial another online service and lets you use this, as if you were still using CompuServe. You hardly notice the difference. You are using Computer Database Plus through a gateway.

CompuServe users searching the IQuest databases get the following welcome message:

```
One moment please...

Connected to 19EASYN

      Welcome to IQuest

(c) 1991 Telebase Systems, Inc.
   U.S. Patent No. 4,774,655
```

Through another gateway, CompuServe connects you to the online service Telebase Systems, Inc. Telebase lets you go through other gateways to search in databases on online services like BRS, MEDLINE and NewsNet.

While searching, you may get similar progress reports:

```
Dialing BRS
Connect BRS
Scanning .... Please wait
Dialing Medline
Connect Medline
Scanning .... Please wait
```

All the time, your modem is connected to CompuServe. You are mentally using IQuest and not other online services. Technically, you are going through various gateways to reach the information libraries. You pay CompuServe for the privilege. In turn, they pay a fee to Telebase, and others.

You can read The New York Times on Down Jones News/Retrieval through gateways from MCI Mail and GEnie.

Accessing information through a gateway is often simpler than logging on to several online systems. Calling several systems often costs more, and it certainly takes time.

Users of BBSes connected to RelayNet or FidoNet can join in global discussions. Participants in other countries also call their favorite local systems. To the individual user, it looks as if they all use the same bulletin board system.

The networks that tie these boards together regularly send new discussion items to the other participating boards. Write "This is not correct!" in a distributed conference on a Norwegian FidoNet BBS, and others may soon read your line on San Bernardino BBS in Colton (Canada), Wonderland Board in Macau or the HighTech BBS in Sidney (Australia).

SciLink (Canada) administers a network for distribution of conferences between systems using the Caucus software system. Participants in Tokyo, Toronto and San Francisco can discuss as if they were all logged on to the same online service.

The main purpose may not be to make it simpler or cheaper for the user. One typical motive is to reduce an online service's own communications costs.

KIDLINK is a global project for children between 10 - 15 years of age. It allows kids to discuss through a system of electronic mail.

Part of the dialog takes place by the children sending email to a recipient called KIDCAFE. A message to 'the cafe' goes through the international networks to a host computer in North Dakota (U.S.A.). There, a computer program called LISTSERV distributes copies of the message to names on an electronic address list. (Conferences administered by a LISTSERV are called 'discussion lists'.)

SciLink in Toronto is one recipient. Messages forwarded from North Dakota are made available for users as entries in a 'local' conference called KIDCAFE. A user in Tokyo can read a message, as if it had been entered locally. If she wants to reply, her answer is sent back to the LISTSERV for redistribution to the world.

Western Michigan University (U.S.A.) is also a recipient. Here, another LISTSERV program is in charge of forwarding the mail to yet another list of (local) addresses. We call it a 'mail exploder'.

This mailing list has been set up by local administrators to reduce costs. The individual user is not allowed to receive copies of messages all the way from North Dakota.

One Michigan recipient may be a local area network. You will find many smart technical solutions in the online world.

Actually, this is how the online world got started. Two systems were interconnected for exchange of electronic mail. Then, another system was added, and another. One day it was a global network of computer systems.

Some network systems are connected by leased telephone lines. Other networks, like FidoNet, depend mainly on dial-up using regular voice-grade telephone service. Each BBS dial regularly to other computers in the network to send or receive mail and files. They may do it once per day, twice per day or whatever.

Then someone got the idea of interconnecting networks. FidoNet was connected to the UUCP network, which was connected to the Internet, which in turn was connected to the Bergen By Byte BBS in Norway, CompuServe, SciLink, MCI Mail, and various local area networks.

Today, the online world is a global web of networks. The world is 'cabled'. You, me and all the other modem users stand to benefit

enormously.

4. The services

The most popular online services are electronic mail, chat, file transfers, conferences and discussion forums, news, reading of online journals and grassroots publications, database searching, entertainment. The online world has an infinite number of niches, things that people are interested in and have fun doing.

Electronic mail

is not just like paper mail. Email is faster, easier to edit and use in other applications.

Your mail may be private, or public. It can be 'broadcasted' to many by a mailing list. The principle is the same on all systems.

Typically, an email message is sent to your mailbox in the following form:

```
To:  Odd de Presno
Subject: Happy Birthday
Text: I wish you well on your birthday. -Ole
```

The mailbox systems automatically add your name (i.e., the sender's return email address), the creation date, and forward it to the recipient. If the recipient's mailbox is on another system, the message is routed through one or several networks to reach its destination.

Several email services offer forwarding to fax, telex or ordinary postal service delivery. Some offer forwarding to paging services. When new mail arrives in your mailbox, messages with text like 'MAIL from opresno@extern.uio.no' will be displayed on your beeper's small screen.

Soon, you can send electronic mail to anyone. By the turn of the century, it probably will be difficult to tell the difference between fax messages and email. The services will automatically convert incoming faxes to computer-readable text and pictures, so that you can use them in word processing and other computer applications.

Automatic language translation is another trend. You will soon be able to send a message in English, and have it automatically translated into Spanish for Spanish-reading recipients, or into other languages. Conference systems with automatic translation are already being used in Japan (English to/from Japanese).

One day we may also have a global email address directory. "What is the address of Nobuo Hasumi in Japan." Press ENTER, and there it is.

Today, the largest commercial players email vendors are MCI, Dialcom, Telemail, AT&T Mail and CompuServe. The fight for dominance goes on.

'Chat'

Email has one important disadvantage. It may take time for it to be picked up and read by the recipient. The alternative is real-time conferencing, a form of direct keyboard-to-keyboard dialog between users. We call it 'chat'.

Most large systems let you chat with many users simultaneously. Even small bulletin boards usually have a chat feature.

Chat is set up in several ways. On some systems, you see each character on the screen once it is entered by your dialog partners.

Other systems send entries line by line, that is, whenever you press ENTER or Return. Here, it may be difficult to know whether the other person is waiting for you to type, or if he is actively entering new words.

You will find regular chat conferences in CompuServe's forums. Often, they invite a person to give a keynote speech before opening 'the floor' for questions and answers. John Sculley of Apple Computers and various politicians have been featured in such 'meetings'.

In May 1991, the KIDLINK project arranged a full-day chat between kids from all over the world. Line, a 12-year old Norwegian girl, started the day talking with Japanese kids at the Nishimachi and Kanto International School in Tokyo. When her computer was switched off late at night, she was having an intense exchange with children in North America.

The chats took place on various online services and networks, including Internet Relay Chat (IRC), BITNET's Relay Chat, Cleveland Free-Net (U.S.A.), TWICS in Tokyo, the global network Tymnet, and the Education Forum on CompuServe.

The discussions had no moderator. This made the encounters chaotic at times. The kids enjoyed it, though! One-line messages shot back and forth over the continents conveying intense simultaneous conversations, occasionally disrupted by exclamations and requests for technical help.

Speed is a problem when chatting. It takes a lot of time since most users are slow typists.

If individual Messages span more than one line, there is always a risk that it will be split up by lines coming from others. It takes time to understand what goes on.

Users of SciLink (Canada) use a method they call 'semi-sync chat'. The trick is to use ordinary batch-mode conferences for chatting. Instead of calling up, reading and sending mail and then log out, they stay online waiting for new messages to arrive.

This approach allows you to enter multiple-line messages without risking that it to broken up by other messages. The flow of the discussion is often better, and each person's entries easier to understand.

File transfers

The availability of free software on bulletin boards brought the online world out of the closet. Today, you can also retrieve books and articles, technical reports, graphics pictures, files of digitized music, weather reports, and much more.

Millions of files are transferred to and from the online services each day. File transfers typically represent over 75 percent of the bulletin boards' utilization time. Downloading free software is still the most popular service.

In June 1991, users of my BBS (which has only one phone line) downloaded 86 megabytes' worth of public domain and shareware programs. (86MB equals around 86,000,000 bytes.) In May 1993, users downloaded 108 megabytes distributed over 1,446 files.

Add to this the megabytes being downloaded from hundreds of thousands of other bulletin boards. The number is staggering.

If you want to download free software: read in appendix 3 about how to do it.

Downloading is simple. Just dial an online service, order transfer of a given file, select a file transfer protocol (like XMODEM), and the file comes crawling to you through the phone line.

Services on the Internet offer file transfer through gateways using a command called FTP (File Transfer Protocol). It works like this:

> Say you're logging on to the ULRIK service at the University of Oslo in Norway. Your objective is to download free programs from a large library in Oakland, U.S.A.
>
> After having connected to Ulrik, you enter the command 'ftp OAK.Oakland.Edu' to connect to the computer in California.
>
> A few seconds later, the remote host asks for your logon id. You enter 'anonymous', and supply your email address as password. This will give you access.
>
> You use the cd command (change directory) to navigate to the desired library catalog on the remote hard disk. You locate the desired file, and use a GET command to transfer the file to your file area on Ulrik.
>
> When done, you logout from the remote computer to be returned to Ulrik's services. Your final job is to transfer the file from Ulrik to your personal computer using traditional methods.

Being able to send Internet mail does not guarantee access to the ftp command. If ftp is unavailable, you may transfer the file by email using a technique called UUENCODEing.

Here, the file is converted before transfer into a format that can be sent as ordinary mail (into a seven bits, even character code).

When the file arrives in your mailbox, you 'read' it as an ordinary message and store the codes in a work file on your disk. Finally, you decode the file using a special utility program (often called UUDECODE). Read more about this in Chapter 12.

Conferences and discussions

Online conferences have many things in common with traditional face-to-face conferences and discussions, except that participants don't physically meet in the same room. They 'come' by modem and discuss using electronic messages (sometimes also through "Chat").

There are discussions about any conceivable topic, from How to start your own company, Brainstorming, Architectural design, The Future of Education and Investments, to AIDS, The Baltic States, Psychology, and Cartoons.

Instead of calling these discussions "online conferences," some services use terms like echos, discussion or mailing lists, clubs, newsgroups, round tables, SIGs (Special Interest Groups), and forums. They use other terms in an attempt to make their offerings more attractive and exclusive.

Others refer to "conferences" by using the name of the software used to administer the discussions, like LISTSERV, PortaCom, News, Usenet, Caucus, or PARTIcipate.

On the bottom line, we're still talking email. However, while private mail is usually read by one recipient only, 'conference mail' may be read by thousands of people from the whole world.

All of them can talk and discuss SIMULTANEOUSLY. It is almost impossible for one single individual to dominate. The number of active participants can therefore be far larger than in 'face-to-face' conferences.

The conferencing software automatically records all that is said. Every character. Each participant can decide what to read and when. He may even use the messages in other applications later on. Opinions and information can easily be selected and pasted into

reports or new responses.

Some conferences are public and open for anybody. Others are for a closed group (of registered) participants.

They are normally structured by topic and the structure is influenced by the participants' behavior. If the topic is limited, like in "The football match between Mexico and Uruguay," it may start with an introduction followed by comments, questions, and answers like pearls on a thread. After some time the conference is 'finished'.

Conferences called 'IBM PC' or 'MS-DOS' often contain so many different sub-topics that they seem chaotic to the outsider. The message subject headings typically have references to computer equipment (like in 'Wyse 050 or TVI 925'), requests for help (like in 'Need Xywrite help!'), experience reports, equipment for sale, news reports, etc. The sequence of messages are often illogical.

> The contents and the quality of the discussion are what separates one online conference from others.

How a conference grows into something useful, depends in part on the features of the software used by the online service. But this is much less important than the kind of people you meet there and their willingness to contribute.

Messages in the IBM Hardware Forum on CompuServe are divided into 11 sections. Section 2 is called Printers' utilities. If you have problems with an old Epson FX-80 printer, send requests for help to "All" (=to everybody) and store it in this section.

CompuServe has over one million subscribers (1993). They call in from all over the place to join the IBM Hardware forum. Some are there to show off competence (read: to sell their expertise). Others visit to find solutions to a problem, or simply to learn.

A conference with many users increases your chances of meeting others with relevant know-how. As always, the quality of the people is the first requirement of a good conference.

Professional 'Sysops' moderate the discussion in IBMHW. They get up to 15 percent of what you pay CompuServe for using their forum. To them, being a sysop is a profession. They use a fair amount of time trying to make the forum a lively and interesting place.

The Printers/utilities section is not just about Epson FX-80. Its members have hundreds of different printers, each with their own set of user problems. Let's use this to explain differences between some conferencing systems.

Each message in CompuServe's forums contains the sender's name (his local email address), subject, date, and the text itself. We call this the 'bulletin board model'. Here, a message typically looks like this:

```
#: 24988 S10/Portable Desktops
    22-Jul-91  10:05:38
Sb: #T5200 425meg HDD
Fm: Gordon Norman 72356,370
To: Menno Aartsen 72611,2066 (X)

Menno-

Can you share the HD specs on that 425'er...random access time,
transfer rate, MTBF, etc.?

Gordon
```

This message may not be of interest to you. Each day, hundreds of messages OUTSIDE your area of interest are being posted. You do NOT want to read these messages.

CompuServe allows selective reading of messages. You can select all messages containing a given word or text string in the subject title ('Sb:' above). You can read threads of messages from a given message number (replies, and replies to replies). You can read all messages to/from a given person, from a given message number, and from a given date. There are many options.

The PARTIcipate conferencing software functions diametrically different from CompuServe's forum software. PARTI is used on TWICS (Japan), Unison (U.S.A.), NWI (U.S.A.), and The Point (can be accessed through a gateway from CompuServe).

PARTI lets the user log on using an alias. For example, he can use the identity 'BATMAN'. You may never get to know the true name of the other person. On the other hand, this allows people to talk about controversial topics, which they would otherwise not want to have their names associated with.

Anyone can start a conference. It can be public, private or a combination. Combination conferences allow public review of the messages in the conference, but restrict the number of people who can contribute to the discussion.

Enter 'write', and PARTI will prompt you with "Enter the text of your note, then type .send or .open to transmit." Enter the welcome text for your new conference, like in this example:

> "This conference is based on a series of articles about shareware and public domain programs for MSDOS computers, which I wrote for publication in England.
> Since the editor cheated me and they never reached the printing press, I've decided to make them available online instead of letting them rot on my hard disk. Join to read, discuss or (hopefully) enjoy! "

When done, I entered ".open odd de presno", added the name of the conference ("MSDOS TIPS") and a short description ("GOOD PD AND SHAREWARE PROGRAMS").

The conference was presented to the other PARTI users on TWICS like this:

> "MSDOS TIPS" by ODD DE PRESNO, Feb. 23, 1990 at 11:57 about GOOD PD AND SHAREWARE PROGRAMS (7 notes)

Few systems of the bulletin board model let users start their own conferences at will. All new topics must be stored in a given structure. The administrators (sysops) of the service manage the evolution of the 'conference room'. After a while, old messages may even be deleted to make room for new.

In PARTI, conference messages are organized under a topic, or any sub-topics that can be derived from the main topic.

Conferences are modeled after their counterparts in the face-to-face world. They start with an introduction followed by a discussion about a narrow topic, like here:

> "SMART PEOPLE" by MACBETH on Jan. 4, 1992 at 12:27, about WHO ARE THE BEST AND THE BRIGHTEST (504 characters and 17 notes).

In this example above, the welcome message is 504 characters long. Following that, there are 17 other messages (called notes).

Notes are stored without individual subject headers and the

name of a recipient. Everything is posted to 'the group'.

If CompuServe message above had been posted on PARTI, then the first five lines might have been reduced to:

12 (of 12) SHABBY DOG Jul. 22, 1991 at 10:05 (119 characters)

On PARTI, all participants read all notes. Selective reading must be done in other ways (by searching conference contents).

These two conferencing models seem to attract different types of discussions. PARTI has given birth to more discussions on topics like these (from PARTI on The Point, January 1992):

"HELLO BEEP" by THE SHADOW on Sept. 17, 1991 at 19:20, about BEEP'S ADVENTURES IN JAPAN, AND THE LIKE (840 characters and 22 notes).

"MEMORIES" by LOU on Dec. 21, 1991 at 12:31, about .....I REMEMBER WHEN..... (423 characters and 1 notes).

"AMENDMENT II 1991" by PASSIN THRU on Dec. 25, 1991 at 20:55, about OUR RIGHTS TO OWN AND POSSESS FIREARMS, AND THE MYTH REGARDING ASSAULT WEAPONS. (3036 characters and 38 notes).

"TV SHOWS" by THE SHADOW on Nov. 16, 1990 at 18:00, about DISCUSSION OF TELEVISION SHOWS (105 characters and 37 notes).

"PHILOSOPHY FOR AMATEURS" by MACBETH on April 13, 1990 at 10:08, about TALKING ABOUT THINKING (187 characters and 97 notes).

"HAPPY BIRTHDAY TOTO" by PONDER on Jan. 2, 1992 at 14:34, about AND I BET HE THOUGHT I FORGOT. (86 characters and 15 notes).

"ONLINE LOTTERY" by DEEDUB on Jan. 3, 1992 at 07:40, about MULTIPLYING OUR CHANCES TO WIN THE LOTTERY (1238 characters and 62 notes).

"WHO SHOT KENNEDY" by MATT on Jan. 3, 1992 at 22:29, about THE ASSASINATION OF JOHN F. KENNEDY; THOUGHTS, COMMENTS, QUESTIONS AND THEORIES! (529 characters and 83 notes).

"THE ECONOMY" by LOU on Jan. 5, 1992 at 16:40, about THE ECONOMY, AS IT AFFECTS US ALL. (167 characters and 49 notes).

"PUERTO RICO" by PACKER on Jan. 18, 1992 at 20:47, about PARA DISCUTIR ASUNTOS PUERTORIQUENA (166 characters and 9 notes).

Systems using the bulletin board model rarely have conferences like "MEMORIES." In PARTI, one-note conferences are allowed to stay. In the bulletin board environment, they soon disappear.

You can probably still join MEMORIES on the Point to add your own feelings or point-of-views.

In larger PARTI conferences, the notes can be read like a book. Often, side discussions appear like 'branches' on a 'tree'. Join and read them, if you want to. Or just pass.

The bulletin board systems (including CompuServe's forums) and PARTIcipate are at two extremes of the spectrum of conference systems. Toward the BBS model, there are systems like FidoNet Echo, RBBS-PC, and PortaCom. Toward the PARTI side, there are systems like Caucus.

Many companies set up bulletin board systems to provide technical

support to customers. McAfee Associates, Inc. in California is one example. They offer technical information, help, upgrade software, list of agents, technical bulletins with lists of products, and new products through agents' support BBSes all over the world. For example, when in Port of Spain, Trinidad & Tobago call the Opus Networx BBS at (819) 628-4023.

Setting up a professional BBS is not very expensive. You can easily have 32 people online to the same conference simultaneously on a standard 80386-based PC, running Xenix and Caucus conferencing software. This is what the Washington Information Service Corp. in U.S.A. did. There's an abundance of software to choose from.

Many companies rent private 'conference rooms' on commercial online services rather than doing it in-house. The advantage is easier access to an established multi-user system and user base.

Microsoft, Toshiba, Quarterdeck, Digital Research, Tandy, Novell and hundreds of others rent public support forum space on CompuServe to keep in touch with customers all over the world. Others rent space on regional bulletin boards.

Other corporate applications of such services include internal organizational development and communications, and coordination of projects.

On Norwegian bulletin boards the main language is Norwegian. In France, expect French. Local systems usually depend on messages in the local language.

Services catering to a larger geographical area often have a different policy. English is the most common language for international discussions. Spanish possibly number two. Example: TWICS in Japan is an English language system. Its Spanish language conference ESPANOL has participants from Japan, Mexico and Norway.

On MetaNet (Arlington, U.S.A.) the conferences are divided into conference areas. One area was called The Salon. The welcome message said: 'All conferences and responses posted here may freely be ported to other conferencing systems'. MetaNet regularly 'ports' (exchanges) conference notes with systems in Europe, Asia and North America.

Exchanging conferences have long traditions in the bulletin board world. To some, it is routine to call Thunderball Cave BBS in Oslo to discuss photography with people in California. New messages are exchanged daily across country boundaries.

The global web of connections between computers enables us to discuss with people living in other parts of the world, as if they were living next door.

Things Take Time!

How long does it take a message to get from Hyougo in Japan to Saltrod in Norway? Or to Dominique Christian in Paris?

Sometimes, mail travels from mailbox service to mailbox service in seconds. That is usually the case with messages from my mailbox in Norway to KIDLINK's LISTSERV in North Dakota, U.S.A.

Messages that must go through many gateways may take more time. How long it takes, depends on the degree of automation in the mail systems involved, and how these systems have been connected to the global matrix of networks.

Speed is high if the computers are interconnected with fixed, high-capacity lines. This is not so for mail from Oslo to Dominique in Paris. His mail is routed through a system in London and is forwarded once per day through a dial-up connection. It usually takes at least one day to reach the destination.

News

Most large news agencies have online counterparts. You can often read their news online before it appears in print. This is the case with news from sources like NTB, Agence France-Presse, Associated Press, Kyodo News Report (Japan), Reuters, Xinhua English Language News Service (China) and TASS. Some news is only made available in electronic form.

News may be read in several ways, depending on what online service you use:

* From a list of headlines. Enter a story's number to receive its full text. The news may be split up into groups, like Sports, International news, Business, and Entertainment.

* Some services let you hook directly into a news agency's 'feed line' to get news as it is being made available. At 11.02, 11.04, 11.15, etc.

* News may be 'clipped' and stored in your mailbox twenty-four hours a day, seven days a week. Clipping services search articles for occurrences of your personal keyword phrases while you're offline. In this way, you can monitor new products, companies, people, and countries, even when you're not online.

NewsFlash is NewsNet's electronic clipping service, a powerful resource that lets you monitor NewsNet's newsletters for topics of interest.

On the Executive News Service (CompuServe), you can search for words in story headlines. You can also search for first three lines of text from 8,000 stories/day from Washington Post, OTC NewsAlert, Associated Press, United Press International and Reuters Financial News Wire.

Newspapers used to receive news through the wires before the online user. This built-in delay has now been removed on many services. Industry and professional news is usually available online long before it appears in print.

Databases

Some years ago, most databases just contained references to articles, books and other written or electronic sources of information. The typical search result looked like this:

> 0019201 02-88-68
> TRIMETHOPRIM-SULFAMETHOXAZOLE in CYST Fluid from Autosomal Dominant POLYCYSTIC KIDNEYS.
> Elzinga L.W.; et al. W.M. Bennett, Dept. of Med., Oregon Hlth. Sci. Univ., 3101 Southwest Sam Jackson Park Rd., Portland, OR 97201.
>
> Kid. Int. 32: 884-888. Dec. 1987
>
> Subfile: Internal Medicine; Family Practice; Nephrology; Infectious Disease; Clinical Pharmacology; Highlights of General Medicine

You had to take the reference to a library to get a print copy of the article. Some services let you to order a copy while online, to be sent you by mail from a copying service.

Full-text searching is now the rule. When you find an article of interest, you can have the full text displayed on your screen at once (normally without accompanying pictures and tables, though). The search commands are simpler and more powerful.

Just for fun

Many online services focus on your leisure time. They offer reviews and news about movies, video, music, and sport. There are forums for stamp and coin collectors, travel maniacs, passionate cooks, wine tasters, and other special interest groups. Besides, many services are entertaining in themselves.

Large, complex adventure games, where hundreds of users can play simultaneously, are popular choices. People sit glued to the computer screen for hours.

'Chat', this keyboard-to-keyboard contact-phone type of simultaneous conversation between from two and up to hundreds of persons, is also popular. It works like a combination of a social activity and a role-playing/strategy/fantasy/skill-improving game.

Shopping is the online equivalent of traditional mail order business. The difference is that you can buy while browsing. Some commercial services distribute colorful catalogues to users to support sales. Some distribute pictures of the merchandise by modem.

You can buy anything from racer fitness equipment and diamonds to cars. Enter your credit card number and the Chevrolet is yours. The online mail order business is becoming increasingly global.

Level 5: The user interface

This term describes how the online service is presented to you, that is, in what form text, pictures and sound appear on your personal communications computer.

Most online services offer the first three of these four levels. Some offer more:

1. Menus for novices. The user can select (navigate) by pressing a figure or a letter.
2. Short menus or lists of commands for the intermediate user. The user knows some about how the service works, and just wants a short reminder to help navigate.
3. A short prompt (often just a character, like a "!"), which tells the expert user where he is in the system right now. Those knowing the service inside out, don't need reminders about what word or command to enter at this point.
4. Some services offer automatic access without any menus or visible prompts at all. Everything happens in a two-way stream of unintelligent data. The only menus that the user sees, are those belonging to the program running on his personal computer.

Some services emphasize colors, graphics and sound. They may require that users have certain hardware or special add-on cards in their communications computer. Often, a special communications program is also needed.

Other services use methods for presenting colors and graphics already built into their users' computers (and programs).

Colors, graphics and sound are highly desirable in some applications, like online games and weather forecasts. But even where it is not important, there will always be many wanting it.

To the professional on a fact-gathering mission, these features may give slower data transfer and problems when saving text to disk for later use. Therefore, many prefer ASCII text with no extras.

Sports cars are nice, but for delivering furniture they're seldom any good. The same applies to the user interfaces. No one is perfect for all applications.

Level 6: The data transporters

When the online service's host computer is far away, the user often faces the challenges of:

1. Noise on the line, which may result in unreadable text or errors in the received material.
2. Expensive long distance calls

There are many alternatives to direct long distance calling. Some offers better quality data transfers and lower costs.

The regional packet data services used to be a popular option. In Scandinavia, the offerings of the local PTTs are called Datapak. Similar services are offered in most countries, often by a national telephone monopoly.

Competitively priced alternatives are appearing in many countries as national telecom monopolies are brought to an end. For example, Infonet, TRI-P, and i-Com compete successfully with former monopolies for transport of data to and from North America.

The Internet is a global network serving millions of mailboxes. It provides very cost-efficient mail exchange with private and public networks throughout the world.

IXI is a packet data network operated by European Research centers. DASnet offers transport of mail between mail systems that have no direct connection with each others. (More about this in Chapter 13.)

Level 7: The user

This is you and me. Turn the page to the next chapter and read about how to use the online services.

Chapter 3: How to use the online services

The user interface refers to what you get on your computer screen and how, when you call an online service. It includes menus and help screens, and various options to tailor the service to your personal preferences.

Navigating by menus is simpler

Most online services have menus to make them easier for novices to use. A typical menu looks like this:

```
R)ead messages
Q)uick search available messages
W)rite messages
C)omments to Sysop
D)ownload programs
?) for help
G)oodbye. This is enough!
```

Enter a letter (or ?) to select a function. Enter R to read messages. There is hardly any need to read the documentation to use this service.

CompuServe greets European users with this menu:

```
  CompuServe Europe         EUROPE

  COMPUSERVE EUROPE MAIN MENU

   1 About CompuServe
   2 What's New
   3 Member Assistance
   4 Electronic Mail
   5 Personal Computer Support
   6 Company Information
   7 Logon Instructions (Europe)
   8 CompuServe Information Service (U.S.)
```

Enter '8' to get another menu:

```
  CompuServe                    TOP

   1 Member Assistance (FREE)
   2 Find a Topic (FREE)
   3 Communications/Bulletin Bds.
   4 News/Weather/Sports
   5 Travel
   6 The Electronic MALL/Shopping
   7 Money Matters/Markets
   8 Entertainment/Games
   9 Hobbies/Lifestyles/Education
  10 Reference
  11 Computers/Technology
  12 Business/Other Interests
```

You can "go" to Associated Press' newswires or the section for home-schooling in the Education Forum by entering numbers listed in menus. The service is like a tree with menus by every set of branches.

A code in the upper right-hand corner of each screen tells you exactly where you are. The last menu has the code 'TOP' meaning that this menu is at the 'top of the tree'.

By each CompuServe system prompt, the command GO followed by a destination code will take you directly to a desired location. Enter GO IBMHW to go directly to the IBM Hardware Forum.

The GO command will save you time and money. Similar codes and commands are used on several other online services.

On many systems, the first menu encountered when logging on is a list of announcements and new offerings. The following is from GEnie, General Electric's Consumer Information Service (U.S.A.):

```
   GEnie Announcements (FREE)

 1. July 1991 GEnie Billing Completed.  To review yours, type:....*BILL
 2. Hot Summer Nights continues to SIZZLE.......................*HSN
 3. NEW...Quality Product and Amazing Value in..................SOFTCLUB
 4. LAST CHANCE---Blue GEnie Sweatshirts........................*ORDER
 5. Color hypermedia in Apple II world. HyperStudio RTC in.....A2
 6. Meet the Product Manager, FREE RTC..........................SFRT
 7. "Future of Online Gaming" RTC with GEnie Game Designers in....MPGRT
 8. A Revolutionary Credit Service - TRW CREDENTIALS.............TRWCREDIT
 9. 900 Numbers: Ripoff or Good Business Sense - RTC 8/11 9PM.....RADIO
10. Air Warrior Convention set for Sept.26-29. in Washington......AIR
```

```
11. SEARS Fall/Winter Catalog On-line NOW.....................SEARS
12. How to Sell your CRAFTS for Profit.........................HOSB
13. Stellar Warrior Campaign starts with a FREE weekend.......WARRIOR
14. Followup Investment RTC with Mickey Friedman in............REAL ESTATE
15. Federation II, the adult space fantasy.....................FED

Enter #, <H>elp, or <CR> to continue?
```

At the 'Enter #' prompt, enter '7' to go directly to the "Future of Online Gaming" conference (RTC=Round Table Conference). Enter H for Help, or press Return to get to the systems' main menu.

You can "go" to selected services by entering a videotext page number code or a number (selected from the menu). Type 'mail' to get to your mailbox, 'backgammon' to play, or 'SEARS' to visit the online version of this North American shoppers' paradise.

'Mail' has page number 200. Enter 'm 200' to go there directly. To go to NewsBytes' technical news reports by subject, select "5" from menu page number 316.

GEnie even has a faster way. Like some other services, it let you stack commands. Instead of issuing one command, and then wait for the system to respond before issuing the next command, stacking allows you to put all commands on one line. The command "m 316;5" will take you directly to choice 5 from the menu on page 316 without displaying intermediate menus.

Many online services use the same template. They have commands like GO SERVICE-NAME, JOIN SERVICE-NAME (or just J), DELTA SERVICE-NAME, or just the code or name of the offering as in 'mail' and 'sears' above.

Entering H or ? (for help) usually give you assistance. Few services are fussy about whether you use lower or capital letters in commands.

On some services, and especially if a selection requires just a letter or a number, you don't even have to press return to make it happen. This method is used on many bulletin boards.

Some codes are standard. This is particularly the case with "?", H, or Help for more information.

Test drive

Several commercial systems let you try the service for free or at lower rates. You can check what's out there without paying for the exploratory connect time, and get some free training in how to use the service.

CompuServe's Practice Forum (GO PRACTICE) does not carry any connect charges, but applicable communication surcharges are still in effect. They also have a free 'Guided Tour'.

Free trials are particularly useful before a search in an expensive database. Use DialIndex on Dialog. Orbit has DBIN (The database Index), and Data-Star has CROS. They are master indexes to the databases on the system. First, select a general subject area, then enter your search terms. The systems will respond with lists of databases and hit counts.

Note: You must go to the 'real' databases for results. You cannot retrieve actual information during a test drive.

Selecting an expert level

Most services regard all new users as novices. The software designers assume that users don't want (or are unable) to read lengthy explanations. They think that most users prefer navigation by going from menu to menu.

Commercial services may support this view for financial reasons, and especially when charging for access by the minute. (Some of them let you read their help screens for free, though.)

Menus are important when browsing new offerings, or accessing services that we seldom use. Frequent users of a service, however, quickly learn how to do things. Menus may soon begin to annoy rather than please. Reading them costs money, and it slows our communications down.

We do not need menus when accessing online services in fully automated mode. Your communications program remembers exactly what to do, and does all the typing for you.

There is no point in paying extra for having menus. You'll not read them anyway. The objective is to access the service at maximum speed and the lowest possible cost.

Most online services can be tailored to your personal needs and preferences. Many let you choose between:

* Full menus
* Short menus
* A prompt line with a list of the most often used commands,
* a prompt character or word (see "prompt" in appendix 4 for examples). Prompts can be used by automatic communication script files to trigger the next action.

If concerned about costs, note that you can use expert mode without being a true expert. Just print the menus, and keep them by your keyboard while moving around.

Some users draw 'road maps' of the services to navigate more quickly. Others automate the process using automatic communications scripts.

Tailoring your services

The need to tailor the online service's prompts and menus differs considerably from user to user, as they use all kinds of computers for communication.

Some screens are large. Other screens can only display a few lines of text at a time. One user of my BBS even used a Hewlett Packard pocket calculator with a tiny, tiny screen.

Many online services allow you to tailor the way information is sent to you.

If you are satisfied with how things are, skip the next couple of pages and read from "Connecting the first time." If curious of your options, read on for a somewhat brief and technical overview.

Besides a selection of various types of menus, you can usually also set the following preferences:

* What menu is to be the first, when you access the service?
* The first menu is to be a tailored menu containing your favorite offerings, and nothing else.
* Colors, graphics, or no colors/graphics.
* Preferred file transfer protocol (to avoid a question each time you want to transfer a file).
* Desired terminal emulator, like TTY, VT-100 or VT-52.
* CAPITAL LETTERS or Mixed Case.
* What ASCII character code to use for the DELETE function.
* How many spaces to insert when expanding TABs in your mail.
* Number of lines per screen (for example, 24 on an IBM PC, or eight on a TRS-80 Model 100. Whether scrolling is to pause after each screenful or not.)

* Number of characters per line (for example, 80 lines on a PC, or 40 on a TRS-80 Model 100.
* If the linefeed character is to be sent or not.
* If blank lines are to be sent.
* Whether the service is to check when you log on to see if you're using special software (as in 'Inquire for VIDTEX' on CompuServe).
* The use of 'echo'. Is the service to return the characters that you enter on your keyboard?
* Use of delay when sending linefeeds. (Useful if capturing text to a dumb printing terminal. If text scrolls too fast for the printer, you risk losing some of it.)
* Choice of prompt character, or prompt text string. This is useful when communicating by script files. On CompuServe, I have asked the system to add the BackSpace character (ASCII character number 8) to the end of all forum prompts. Since this character is rarely found in messages or other texts, I can safely let scripts depend on this prompt character for unattended communication.

Displaying information on the screen

An 'A' is not an 'A' no matter what service you use. If you call Tocolo BBS in Japan (Tel.: +81-3-205-9315. 1200 bps, 8,N,1.) with a non-Japanese MS-DOS computer, chances are that the welcome text will look like this:

```
*-----------------------------------------------------------------*
*  D0:[ BBS    (<^/9] 7.8)                                        *
*   62>] =3     ---> 3  (@^2K.3 03-205-9315)                      *
*   3]V3 <^6]   ---> 24 <^6] 6D^3 C=D A-3                         *
*                    (Wed 9:00-17:00 J R]C I @R 5T=P C^=)         *
*-----------------------------------------------------------------*
```

You'll need a Japanese ROM (Read-Only Memory) in your computer, a special graphics program, or a Japanese language operating system to have the Kanji characters displayed properly on your screen.

The characters that you see on your computer's screen are based on a code. The computer finds the characters to display from a table built into your system's hardware or software.

Most personal computers can be preset to use various tables depending on your needs. When communicating in English, you may want it to show Latin characters. When writing in Japanese, you may want it to display Kanji characters.

Those writing in Norwegian, often want to use the special Scandinavian characters øØæÆåÅ. If the first two of these Nordic characters read like the symbols for Yen and Cent, you're not set up for Scandinavian characters. If your system is set up correctly, they should look like an 'o' and an 'O' overwritten by a '/'.

[** TRANSCRIBER's NOTE: The 6 'special characters' above were re-coded incorrectly and have been reconstructed. The source character codes for all six were:
0x1B, 0x1D, 0x11, 0x12, 0x06 and 0x0F. These seem to be offsets from 0x80 in Code page 856.]

The code telling your computer what to display, may also contain information about where to put characters and what colors to use.

Thus, an online service may order your computer to display a given character in column 10 on line 2, and to print it in blinking

red color. If you're not set up correctly, these codes may show as garbage on your screen rather than as a colorful character in a given position.

If you call a service set to display text in VT-52 format, and your communications program is set accordingly, then you should be OK. VT-52 is a setup that makes a program or a service 'behave' like a DEC VT-52 terminal.

Being able to view VT-52 coded text on your screen, does not guarantee that you can capture this 'picture' to a file on your disk. Your communications program may need special features to do that. If these features are missing, you are in for a surprise. The text in your capture file may look like in this example (it came on a single, long line on my computer):

```
----------------------------------------------------------------------
_*H*J*Y"4   Innhold*Y%>                                *Y&4Emneoversikt
1   Brukerprofil    6*Y)4Stikkord A-]       2   Bruker-         *Y*4
veiledning      7*Y,4Informasjons-                          *Y-
4leverand|rer A-]   3   Teledatanytt*Y.W    8*Y04Personlig indeks
4*Y2H                   *Y34Meldingstjenesten  5   Avslutte
9*Y64   ]pningsside *00#                     *Y 4TELEDATA
880823-1538*Y74                           NTA01-00a*Y74     *Y74*Y74
----------------------------------------------------------------------
```

[**TRANSCRIBER'S NOTE: the first character in the example above was 0x14, but has been replaced with an underscore.]

The character '*' in this example refers to the ESCape character (ASCII number 27). ESC is used to tell your computer that what follows is a VT-52 display command.

The codes following the ESC say where text is to be printed on your screen (from line number x and column number y).

If your communications program cannot save VT-52 coded text in a readable way, you'll need auxiliary programs to remove or convert the codes. Some communication programs let you take snapshots of the screen, and store the result in a file. This usually gives good results, but it may be a cumbersome approach.

Prestel (British Telecom, England) belongs to a group of online services called videotex (or viewdata). Minitel (in France and the U.S.), Alex (Canada), and Prodigy (U.S.A.) are also in this group. They believe that beautiful color graphics, large characters, and menus give them a competitive advantage.

CompuServe is often called a videotex service because of its emphasis on menus. However, most call it 'ASCII videotex' as it is not depending on special display formats. Their philosophy is that 'plain text' is required to attract many users across hardware platforms.

The viewdata services use graphical display standards with names like Prestel, CEPT, Captain (Character and Pattern Telephone Access Information Network System, in Japan), Telidon (Canada), Minitel, Teletel (France), GIF (the Graphics Interchange Format), Viewdata, and NAPLPS (The North American Presentation Level Protocol Syntax).

You often need special terminal machines to use some viewdata services. On other services, you must use special software plus an emulator card in your computer.

Users of the communications program Procomm Plus can buy a Viewdata module for conversion of Prestel videotex text to plain ASCII, i.e., plain text without imbedded special codes.

Many MS-DOS based bulletin boards let you set access defaults to colors and graphics. Most of them use ANSI graphics in welcome texts and menus. Users of Procomm must set their program to ANSI BBS to take advantage.

Capture these welcome texts and menus to a file on your hard disk, and view them with an editor. They are filled with ANSI escape codes, and thus hard to read (and search). The good news is that conference and forum mail only rarely contains such codes.

Many users routinely keep captured online information on their hard disks for later reference. If this is your intention, make sure that text is sent to you in plain ASCII, or TTY mode.

> TTY sends one line at a time, and only uses the codes TAB, BackSpace, Carriage Return and LineFeed during the transfer. The rest is 'plain text'.

Most online services offer TTY format. You can use the setting almost everywhere. Even the videotex service Prestel offers an option called 'TTY Teletype'.

If 'TTY' or 'ASCII' is not on your online services' list of options, try 'Others' or 'Other computers'. These settings usually identify your computer as unable to handle 'standard' colors, sound and graphics.

Viewdata pages may provide "selling pictures," but the screens often have a low contents of information compared with TTY-based services. They are therefore not my favorite services for news in full-text.

In other applications, like games, colorful graphics are a definite advantage.

Connecting the first time

If you have unlimited financial resources, go ahead and call up services all over the world. Learning by doing is exciting.

If resources are limited, start by reading user information manual. Or, go online to capture key menus and help texts. Print them out on paper for further study before going online again for a 'real' visit.

I always hurry slowly during my first visits to a new online service. I call up, capture information about how to use it, and disconnect. It may take me days to study the material. My objective is to find what the service has to offer in order to plan how to use it most efficiently.

The first important command to look up is the logoff command. There is nothing more frustrating than entering "bye" only to get an error message. If lost, try "quit", "exit", "logoff", "off" and "G", in the hope of finding the correct command. These are the most usual variations. You should also try HELP or "?".

If you really can't figure out how to get off a system, just hang up on it. Be careful, though. Some systems will continue to charge for a period, even after you have disconnected by hanging up.

One of the first things that I do, is set my options to expert status, though I am obviously an amateur at this stage.

Often, I also start automating the process during my first visits. I write script files for automatic access and quick navigation to key offerings. Another good strategy is to look for automated offline readers or systems (see Chapter 16 for details).

Others prefer paper and pencil. They write a list of required commands on a piece of paper, like this:

> Call 0165

At CONNECT:	ENTER @SP ENTER
At the NUI prompt:	Nxxxxxppppp-a170041
At Enter 'dix' and <Enter>:	dix
At -- More --:	ENTER
At Your name:	Odd de Presno
At Password:	hemmelig
At What do you want to do:	
- when no unread mail	goodbye
- when mail to read	ENTER

Put the list by your keyboard before calling the service. Follow it carefully. After a while you may remember the procedure, and can throw away your notes.

Good luck!

Chapter 4: Hobby, games and fun

==========

* Programs, game and fun
  Online adventure games. The virus threat.
* Hobbies. Holiday travels. Collecting stamps or coins.
  Roots, music, and online shopping.

Online services have one thing in common with newspapers, magazines and books. What they offer, varies from provider to provider.

The next chapters will focus on the contents of the offerings. Appendix 1 has details about how to access the major service providers.

Small online services often have interesting offerings in specialized areas, and especially when they are based on local phenomena or events. They tend to be more personal. They often present their 'wares' in a local language, and offer very large collections of free software.

The large online services have hundreds of thousands of users. The activity is often high. They usually attract interesting (and competent) participants to their conferences and forums, have more programs available for download and more news sources and databases to search. They generally give you a wider choice.

We will focus on the large international services. These are available from anywhere without too much effort, and using them comes surprisingly cheap. Therefore, please remember that this book just covers the top of the iceberg. Cheaper services may be found elsewhere, and they may even be better tuned to your particular areas of interest.

Locating game software

The fastest, easiest and cheapest is to call an online service to download game programs. You'll find an overwhelming number of programs for all types of microcomputers.

Many games are free. We call them "Public Domain" or "Freeware" programs. Others are distributed free. You do not have to pay to get them and try them out. If you want to use them, however, the copyright owner expects you to pay a fee. We call them "shareware" or "user supported" programs.

When the game has been transferred to your personal computer, you can play without worries about communications costs, or the busy signal on your phone line.

My favorite game is shareware. The name is Arachnid. It is an MS Windows solitaire game (patience) made by SP Services, P.O. Box 456, Southampton, SO9 7XG, England. The desired registration fee is UKP 15.00 (English pounds). You can download the program from my board as WINCARD.EXE. The file is 106 kilobytes large.

WINCARD.EXE is a special distribution file, which contains three games and all supporting files. The EXE extension may fool you into thinking that it is a program, and in a way it is. The file is a self-extract file, meaning that you just enter "WINCARD" on an MS-DOS computer to extract the game files from the "package."

Games are usually distributed in such distribution files. All files used by a game (or several games) is put into one file by special software, and compressed in size. This makes retrieval of programs easier and cheaper. You do not have to download many related files individually. The transfer takes less time. (Read about how to extract programs from distribution files in appendix 3).

You will find some of the largest collections of games on the North American services CompuServe and EXEC-PC BBS. You will also find many throughout the Internet.

TRICKLE is a large collection of public domain and shareware programs for MS-DOS, CPM, and other computers. For information about how to use TRICKLE, send a message through Internet to
LISTSERV@VM1.NODAK.EDU
In the TEXT of the message write
/pdget pd:<msdos.starter>simtel20.inf
An information file will be sent to your electronic mailbox. (Read the chapter about electronic mail and appendix 1 for more information.)
If TRICKLE is not enough, try Archie. It is the Internet archive server listing service. The Archie database maintains a list of roughly 1.5 million files containing 100 Giga-bytes (that is, 100,000,000,000 bytes) of information available from over 800 anonymous FTP archive sites. You can search this database by email to find where files are located. Some Archie systems maintain a list of libraries all over the world, while others concentrate on a more limited geographical area. Once Archie has told you where desired programs and files are located, you can retrieve them by telnet, anonymous FTP, of FTPmail. Read "File transfers through the Internet" in chapter 12 for details. For information about using Archie, send mail to one of the following addresses (see appendix 4 for more options):
archie@cs.mcgill.ca (Canada) archie@nic.funet.fi (Finland) archie@plaza.aarnet.edu.au (Australia)
Put the word HELP in the body of the mail
Getting programs by email is a three-step process:

| (1) Use Archie to find file names and where they are stored, |
| (2) Send a message to ftpmail@decwrl.dec.com to have them retrieved and forwarded to you by email, and |
| (3) Use a utility program to convert the file to a useful format. (See chapter 12.) |
| |
| Check out JVArcServ for an Archie-alike service on FidoNet. |

Chances are that online services in your area also have many programs to offer. Most free bulletin boards have more software than you'll ever get around to try.

Usually, there is a natural specialization between boards. Those using the Unix operating system, have the largest number of programs for such machines. Those running on MS-DOS computers, have more programs for such computers.

Some games are trite and bad. Others are brilliant. There are ladder games, games challenging your responses (racer car driving, flight control, war games, subsea games), electronic versions of traditional games like Backgammon, Yatzy, chess and bridge, educational games (geography, mathematics and history), puzzles, fractal programs (drawing beautiful pictures on your screen), psychological tests, text-based adventure games, and other strange and funny creations. Here is something for any taste or belief.

If you want to get rich in a hurry, pick programs that increase chances of winning horse race bets, or other "real world" money winning games.

If you're into beautiful girls, fill your hard disk with picture files in GIF, PCX or other graphics formats. (Sorry ladies, there are not many pictures of naked boys around.) You'll also find software that will display the pictures that you just retrieved.

Keen users of the more popular games often want to swap tricks and discuss experiences: Super Nintendo players regularly meet on the SNES mailing list (on SNES@spcvxa.spc.edu). To join, send your subscription request to: SNES-Request@spcvxa.spc.edu .

For chess, try the Chess Discussion List (CHESS-L@GREARN.BITNET) unless Chinese Chess (on XIANGQI@INDYCMS.BITNET) is what you're looking for. CompuServe has a Chess forum (GO CHESSFORUM) with message sections called: Chess Basics, Theory & Analysis, News Wire, Hardware/Software, Casual Games, Electronic Knights, Oriental/Variants, Tourneys (Open), USCF Rated Games, Team Play, and Time Out.

Usenet excels when it comes to games:

rec.gambling	Articles on games of chance & betting.
rec.games.board	Discussion and hints on board games.
rec.games.board.ce	The Cosmic Encounter board game.
rec.games.bridge	Hobbyists interested in bridge.
rec.games.chess	Chess & computer chess.
rec.games.design	Discussion of game design related issues.
rec.games.empire	Discussion and hints about Empire.
rec.games.frp	Discussion about Role Playing games.
rec.games.go	Discussion about Go.
rec.games.hack	Discussion, hints, etc. about the Hack game.
rec.games.misc	Games and computer games.
rec.games.moria	Comments, hints, and info about the Moria game.
rec.games.mud	Various aspects of multi-users computer games.
rec.games.pbm	Discussion about Play by Mail games.
rec.games.pinball	Discussing pinball-related issues.
rec.games.programmer	Discussion of adventure game programming.
rec.games.rogue	Discussion and hints about Rogue.
rec.games.trivia	Discussion about trivia.

```
  rec.games.video         Discussion about video games.
  rec.games.video.arcade  Discussions about coin-operated video games.
```

With so many games and programs around, it is difficult to stay current about new programs and new versions of old ones. Consider subscribing to the MS-DOS Archive Additions (one-way) information service. Internet MS-DOS archive managers use it to announce new additions to their collections.

To subscribe, send a message to LISTSERV@TACOM-EMH1.Army.Mil with this command in the body of the message:

```
subscribe msdos-ann
```

These announcements are also posted to the Usenet newsgroup called comp.archives.msdos.announce .

| It is probably easier for you to relate to references like "rec.games.video on Usenet," than to XIANGQI@INDYCMS.BITNET. References to BITNET mailing lists are made in various ways throughout the book, just as it is online. This is the basic rule:
|
| All BITNET mailing lists are 'managed' by a LISTSERV program, which handles all subscription requests. When you read a reference like XIANGQI@INDYCMS.BITNET, then that means that a subscription request must be set to the LISTSERV at the INDYCMS computer on BITNET. Mail to the forum, however, must be sent to XIANGQI@INDYCMS.BITNET to be forwarded to the other members.
|
| For more information about these strange address codes, and how to use them, read about BITNET in appendix 1. You may find it useful to read about email addresses in Chapter 7.
|
| All BITNET mailing lists can be used by email through the Internet. Several BITNET hosts also have Internet addresses. Example: LISTSERV@NDSUVM1.BITNET can also be reached as LISTSERV@vm1.nodak.edu . When dual addresses are given, Internet users should use the Internet address, while BITNET users should use the BITNET address.
|
| Note: In cases where a BITNET mailing list has dual addresses, we have usually given the Internet address. If you are on BITNET, and using these addresses are difficult or impossible, ask your local postmaster for help.

Computer viruses

Few online users ever live to see or experience a computer virus, but they do exist. So, read this:

A virus is a small, hidden computer program that can cause the loss or alteration of programs or data, and can compromise their confidentiality. It can spread from program to program, and from system to system, without direct human intervention.

The chance of your computer being infected is small, but you're never safe. Therefore, download a program for virus detection and identification, like VIRUSSCAN from McAffee Associates, 4423 Cheeney Street, Santa Clara, CA 95054-0253, U.S.A. They also have virus disinfection programs (for MS-DOS computers).

For more about viruses, subscribe to VIRUS-L@LEHIGH.EDU. CompuServe has the Mac New Users Forum (with a a Virus Clinic section), the McAfee Virus Help Forum, the Symantec AntiVirus Forum, and more. FidoNet has a VIRUS echo. ILINK has VIRUS-I. Usenet has bit.listserv.valert-l (Virus Alert List), and comp.virus .

Online games

If you're into games, why not investigate online adventure games? There are many alternatives. Prestel (England) offers TRASH, an environmental multi-user game with a futuristic theme and full of humor. Up to 64 persons can play simultaneously.

" ...Callers play out the role of pandimensional refuse disposal officers, whose primary aim in life is to clean up the multiverse, as the Trash environment is called."

"With a diverse range of 'psionic powers', which vary from the nasty (pyrokinesis) to the gentle (faith healing), at their command, Trash players roam across dimensions and universes, completing various tasks."

Bulletin boards throughout the world invite you to role playing games. Some have graphics, music and sound effects. Dungeons & Dragons is a popular choice.

On EXEC-PC, play Startrek. Select an identity and "play it out" according to its character. If you're a real afficionado, check out rec.arts.startrek.info on Usenet or the list RASI-L@ncc1701e.uucp (write LISTSERV@ncc1701e.uucp to subscribe).

Advanced players swap tricks on STARGAME@PCCVM.BITNET. On many BBSes, MUD is a most popular game.

> Multi-User Dungeons (MUD) is a structured and user-modifiable online environment, which allows users not only to interact with each other, but to do role-playing, build and furnish living areas and interaction areas, extend and create the interactive "space" and the rules for using that space.

Popular choices on CompuServe are strategy games like The Island of Kesmai and Megawars. One game can last for weeks at a time. On CIX (England), many prefer the multi-user dungeon game DiscWorld.

If you prefer sport fantasies in the armchair, check out GEnie. They offer Rotisserie League Baseball. Decide what team player to be, and join in a match of American baseball.

Nintendo offers online games through the Famicom Networks in Japan and the U.S. Your PC must have a special graphics card to play games like GO and Shogi, a Japanese game of chess.

Chat

Chat, or "keyboard talking," is a popular attraction, and in particular on the large online services.

Your first attempt will probably be a strange experience. When may people talk simultaneously in chat mode, incoherent sentences seem to fly over your computer screen. It takes some training to be able to read what each of them is saying.

CompuServe's Citizen Band Simulator (GO CB) is an electronic version of the hams' short-wave radio. It has 72 CB Simulator channels. You can chat with anonymous members, have fun and find new keypals.

On EXEC-PC's Chat and Entertainment System up to 64 users can talk simultaneously. GEnie calls their service Livewire CB. On BIX, look for CBIX.

Some users are serious about chatting. Several large companies are heavy users. Although this kind of talking is a slow process, it has advantages. It is easy to document the discussion. People from places geographically far apart can meet at a low cost to discuss.

Some online services charge less for chats than for other services.

My hobby

There are online forums for most hobbies: collection of stamps and coins, genealogy, music, holiday travels, skiing, purchase of consumer electronics, video, filming, and more.

Those you meet in the clubs share your interests. They come to exchange information and experiences, to listen, swap stamps or coins, participate in club auctions, and exploit favorable group discounts when buying things for their hobby.

In these clubs, the main attraction is the open messages that people write to each other. Many clubs also have libraries filled with special software (like data base programs for collectors) and information files.

Coins (on Coins@rocky.er.usgs.gov) is a forum for discussion of Numismatics, the study of coins, American and International. Paper currency is also a welcome topic, but trading is not allowed. To subscribe, send a message to robert@whiplash.er.usgs.gov .

Music

ILINK, an international exchange of conferences between bulletin boards, has a forum for country music lovers. It presents itself in these words:

> COUNTRY MUSIC
> Country & Western music including bluegrass and other related forms. Discussion of artists, techniques, instruments & musicians. Host: John Stewart

> One oasis of civility in the BBS maelstrom is the 150-board ILINK network -- recently renamed from InterLink. Unlike most BBS networks, ILINK carefully evaluates each board before permitting membership. "We are very selective -- some say overly selective," says ILINK's international host Andy Keeves. Choosiness keeps ILINK small but upholds the decorum of its message bases.

Usenet has rec.music.country.western . FidoNet has 60S_70S_PROGROCK about the progressive rock music of the 60's and 70's, gospel music in CHR_GSPL_MUSIC, a club for selling and buying between musicians (MUSICIAN'S_SERVICES), and (MUSIC_COMP_101) for aspiring composers.

CompuServe has a bunch of forums. Check out the Music/MIDI sections in the Amiga and Atari ST Arts forums. The latter is a full Music/MIDI forum. The Coin/Stamp/Collectibles Forum has a section for music collectors.

CompuServe's RockNet forum has the following structure:

Available message sections:	Available file libraries:
0 General/Misc.	0 General Misc
1 Rock Music	1 Rock Music
2 Rock Radio	2 Rock Radio

3 Reviews/LK	3 Reviews
4 Q&A/Help	4 Q&A/Help
5 Rock Film & Video	5 Rock Film & Video
6 RockLetters	6 RockLetters
7 Trends	7 Trends
8 Heavy Metal	8 Heavy Metal
9 Old Wave	9 Old Wave
10 New Music	10 New Music
11 CD Hotline	11 Compact Discs
12 Green, Village	12 Graphics/Programs

You can tailor your visits to RockNet to your personal interests. If you're into Heavy Metal, limit your readings of messages to those in section 8, and possibly 3 and 7.

The Music and Performing Arts Forum (GO MUSICARTS) is another interesting place on CompuServe. Converse with fellow music fans about on topics like classical, jazz/blues, Big Band, country/folk and religious music, ballet/dance, drama and more.

MIDI is discussed on several bulletin boards, including in conferences distributed by RelayNet.

Classical music forums can be found on most larger services. Try CLASSM-L on LISTSERV@BROWNVM.BITNET.

For jazz, try the ILINK conference JAZZ, rec.music.bluenote on Usenet, MILES on LISTSERV@HEARN.NIC.SURFNET.NL (about Miles Davis), or BLUES-L at LISTSERV@BROWNVM.BROWN.EDU .

Another jazz oriented list, SATURN on LISTSERV@HEARN.BITNET, is for discussing the free-jazz big band leader, Sun Ra.

Network-Audio-Bits is an electronic magazine bringing reviews and information about rock, pop, new age, jazz, funk, folk music and other genres. (Write Murph@Maine.BITNET to join.)

The Music Newsletter offers reviews and interviews. Subscribe by email to LISTSERV@VM.MARIST.EDU using the command "SUBSCRIBE UPNEWS Your-full-name."

| On BITNET mailing lists, you subscribe by using the command "SUB <mailing-list-name> Your-full-name" in the body of your email.
|
| There are also mailing lists on Unix workstations, PCs, and microVaxen. These may require that you write the subscribe command in full ('SUBSCRIBE'), or use other commands.

To get the "Music List of Lists," an overview of music oriented mailing lists, send email to mlol-request@wariat.org .

GRIND (write grind-request@unh.edu) focuses on discussions about grindcore/death metal/heavy thrash music. PRIMUS is about the funk/rock band Primus (write to primus-request@unh.edu).

KLARINET (on LISTSERV@VCCSCENT.BITNET) is a network bringing news, information, research and teaching items of interest, and other related information for clarinet players, teachers, students, and enthusiasts.

"Backstreets" on UUCP is for those who love the music of Bruce Springsteen (backstreets-request@virginia.edu). "Eclipse" (eclipse-request@beach.cis.ufl.edu) focuses on Pink Floyd and his music. If a fan of Jimi Hendrix, join "hey-joe" (hey-joe-request@ms.uky.edu).

In "brass," the topic is brass band music (write to brass-request@geomag.gly.fsu.edu for access).

"J-Pop" (jpop-request@wystan.bsd.uchicago.edu via UUCP) has discussions about Japanese pop/rock of today.

Wine and food

Some people would rather fill their stomachs than their ears. They call CompuServe for the Cooks Online forum (for gourmets) and the Bacchus Wine Forum (for their throats).

BITNET has the mailing list "Eat" (EAT-L@VTVM2), a club for FoodLore/Recipe Exchange. In J-FOOD-L (J-FOOD-L@JPNKNU10 on BITNET) they discuss Japanese food and culture.

If your interest is more academic, subscribe to FOODWINE (on LISTSERV@CMUVM.CSV.CMICH.EDU). It is for those seriously interested in the academic study of food and its accompaniments in the 1990's, including a variety of disciplines, such as marketing, communications, hospitality, consumer affairs, hotel and catering management.

Usenet has rec.food.cooking, rec.food.recipes, rec.food.drink, rec.food.restaurants, and rec.food.veg for vegetarians. On FidoNet, check out INTERCOOK for words of wisdom on International Cooking.

On ILINK and RelayNet, look for CUISINE. That is where we found the following recipe for Mexican Meatloaf:

```
        2 lb Ground Beef
        1 ea Bell Pepper, Diced
   10 1/2 oz Cream Chicken Soup
       10 oz Cheddar Cheese
        4 oz Green Chilies, Diced
        1 ea Onion, Chopped
        8 oz Taco Sauce
        1 pk Tortillas
        4 oz Mushrooms (fresh optional)
        2 ea Jalapen"'s (to taste)
```

1. Brown ground beef and drain.
2. Mix onions, green peppers, mushrooms, green CHILIES, taco sauce, jalapen"'s and cream chicken soup into skillet with ground beef.
3. Simmer until vegetables are soft.
4. Shred cheddar cheese.
5. In crock pot or dish, layer meat mixture, cheese, and tortillas; heat until cheese melts.

Bon apetit!

Outdoor life

CompuServe's Great Outdoors SIG is for those preferring nature for the computer screen. Its sections are called:

General/Photography, Scouting, Power Boating, TROUT UNLIMITED, Fishing, Hunting, Cycling, AUDUBON/Birding, Canoe/Kayak/Raft, Camp/Hike/Walk/RV, Snow Sports/Climb, OWAA, CIS/Computers, Firearms, NRA, Environmnt/Wildlife, OUTDOOR LIFE mag.

If you dream of visiting Alaska to hunt, fish and explore the wilderness by canoe, then this is the place. Add the Outdoor Cooking section of the Cooks Online Forum to make it perfect.

Scandinavian bulletin boards exchange the "JAKT_FRILUFT" conference (Through MIX). ILINK offers OUTDOORS, which focuses on outdoor hobbies.

As usual, Usenet has a lot. These are some examples:

rec.aviation	Aviation rules, means, and methods.
rec.backcountry	Activities in the Great Outdoors.

rec.bicycles	Bicycles, related products and laws.
rec.birds	Hobbyists interested in bird watching.
rec.boats	Hobbyists interested in boating.
rec.boats.paddle	Talk about any boats with oars, paddles, etc.
rec.climbing	Climbing techniques, competition announcements, etc.

Scouts participate in SCOUTER on FidoNet (International SCOUTING Conference) and SCOUTS-L (SCOUTS-L@NDSUVM1) on BITNET. Golfers meet in GOLF-L (on LISTSERV@ubvm.bitnet).

Photo enthusiasts will track down PHOTO-L@BUACCA.BITNET, CompuServe's Photography Forum and its SCUBA Forum's sections for underwater photography. For more, there's "Photography" on EXEC-PC and The Well, PHOTO on RelayNet, PHOTOSIG on ILINK and rec.photo on Usenet.

If you're into 3-d (stereo) photography, enroll in "3d" on UUCP:

> Contact: 3d-request@bfmny0.bfm.com (Tom Neff)
> Purpose: Discussion of 3-D (stereo) photography. General info, hints, experiences, equipment, techniques, and stereo "happenings." Anyone interested is welcome to join.

There are clubs for all popular outdoor hobbies.

Roots

On ROOTS-L@NDSUVM1.BITNET and soc.roots on Usenet, the emphasis is on genealogy. Here, you'll get tips about tools and techniques. You can exchange information about ancestors and find new friends and partners for joint research.

On CompuServe, it is called The Genealogy Forum. One message section is called Overseas Ancestry. Remember to check out the Family History Library, a newsletter bringing news from the library for genealogical research in Salt Lake City, U.S.A. (stored in Library 10.)

The North American bulletin boards ROOTS-BBS (San Francisco) and THE FAMILY ROOTS (Oklahoma) are connected to FidoNet.

GEnie has the Genealogy Knowledgebase. FidoNet has

GENDATA	Genealogy Database
GENEALOGY:_WGW	Who's Got What (WGW) Data Base
GENSOFT	Genealogy software
SE_GENEALOGY	South Eastern US Genealogy Conference

Since FidoNet has links all over the world, these conferences can give contacts in countries that you might otherwise have problems in reaching.

On most of these services, you'll find interesting genealogy programs and files with practical hints about how to write a book about your family.

Him and Her

Members of the female sex have their favorite meeting places, like Cleopatra on Bergen By Byte. Men do not have admission.

Usenet has soc.feminism. Those with limited access to Usenet, may subscribe to "feminism-digest." Send email to feminism-digest@ncar.ucar.edu to get on the mailing list.

"Contact feminism-digest@ncar.ucar.edu" above means that you need to write a message to this Internet email address with a subscription request, or to receive further information about how to join. This mailing list does not have automatic subscriptions.

To join the mailing list "feminists," write Patricia Collins on collins@hplabs.hp.com . She presents the conference's purpose in this way:

> The feminist mailing list is intended to provide a forum for discussion of issues of interest to women, in a friendly atmosphere. The basic tenets of feminism and the day-to-day experiences of women do not have to be explained or defended. Men and women can join, but everyone requesting to be added to the mailing list MUST provide the moderator with: (1) a full name; (2) a complete UUCP path to a well-known host or a fully specified Internet address; (3) the correspondent's gender (for records and statistics only). NO exceptions.

While we're at it, let's move on to other topics associated with the term sex:

Bisexuals can participate in "sappho" on UUCP. Contact sappho-request@mc.lcs.mit.edu. On BITNET, you'll find BIFEM-L (BIFEM-L@BROWNVM), BISEXU-L (BISEXU-L@BROWNVM) and others.

Spanish speaking users can subscribe to ARENAL (Lista de discussion para hispanos/as que desean acabar con la homofobia). Subscribe by email to LISTSERV@LUT.FI .

Usenet has tons of it: soc.motss, alt.politics.homosexuality, alt.sex.bestiality, alt.sex, alt.sex.bondage, alt.sex.pictures.d, clari.news.group.gays, alt.sex.pictures, alt.sex.motss, clari.feature.kinsey (Sex Q&A and Advice from Kinsey Institute), clari.news.law.crime.sex and clari.news.sex.

Conferences called "SEXUALITY" are alive on FidoNet and The Well. CompuServe has a Human Sexuality Adult Forum and a Human Sexuality Open Forum. STOPRAPE@BROWNVM.BITNET is a Sexual Assault Activist List.

Finally, there are a large number of pictures of nudes in all possible and impossible positions. Most of them are childish, some are decidedly pornographic, a few are beautiful and erotic.

The online services' policies vary about what kind of pictures and picture programs to make available. The larger the service, the more conservative they tend to be.

Programs for hobbyists

It's no rule that a service need to have a conference about a hobby, to have interesting programs available for downloading. Programs float around from service to service much easier than conference items. Still, the best programs for a given hobby are normally found on services where hobbyists meet to discuss.

You will find:

- Chess and bridge programs,
- Morse code training programs for ham amateurs,
- Astrology programs,
- Data base systems for keeping track of music cassettes or records, video cassettes, books, stamps, coins, etc.
- Information systems for wine lovers,
- Recipe programs (tell me what you've got, and I'll tell you what you can make), and much more.

Online shopping

You can buy almost anything online: video cameras, books, music, Bonsai plants, golf equipment, canned cakes from Gimmee Jimmy's Cookies, Levi's trousers for men, computer equipment, a four-door Nissan Pathfinder SE-V6 car, and air tickets for Mexico.

Shoppers who let their modem do the "walking" are already a few steps ahead of people Still stuck shopping the old-fashioned way. Experienced online shoppers know that you can tap a world of stores without ever leaving your keyboard, and that you can browse and buy with very little effort.

Some services present their wares "for your information only." It's like reading newspaper ads. You must contact the seller to buy. Other services have large online supermarkets with many stores, and you can by while you visit.

Subscribers to CompuServe get a monthly magazine by mail. "Go Mall Shoppers' Guide" is a regular insert with color photos and descriptions of selected products. Type GO MALL, order a product, enter your credit card number, and have it sent you by mail.

What if used goods are good enough? ILINK, the international conference exchange system, has GARAGESALE. Here you can buy and sell for hobby or home: Photo, video, audio, sound/music and midi equipment, and all kinds of other domestic items. ILINK also has a conference called BUY-SELL.

HAM-SALE on the FidoNet is for ham amateurs wanting to swap, by or sell. The American computer magazine PC Week is operating a Buyer's Forum on CompuServe.

UUCP's "muscle-cars" is where "muscle car" enthusiasts offer advice, share problems and solutions, discuss technical issues, racing, buying or selling parts, cars, or services, or just discuss cars and swap stories with others. (Contact: muscle-cars-request@sorinc.PacBell.COM).

Similar experiences are waiting for you in "BMW" (Write: bmw-request@sol.crd.ge.com), "british-cars" (Write: british-cars-request@encore.com), "italian-cars" (Write: italian-cars-request@sol.crd.ge.com) and "Z-cars" (the topic is Z-cars from Datsun/Nissan. Write: rsiatl!z-car-request).

Vintage VW (at VintageVW@rocky.er.usgs.gov) is about Vintage Volkswagens. This includes the Beetle, Bus (Types II and II/IV), Ghia, Squareback, Kubelwagen (Thing), bajas, buggies, Schwimmwagen, rails and any VW (air-cooled) powered vehicle including aircraft.

Beginners, gurus, mechanics and non-mechanics, restorers and daily drivers are welcomed. This is where you can discuss how-to stuff, parts availability, answer mechanical questions, list show dates, swap meets, club addresses, favorite stories, etc. To subscribe, send a message to robert@whiplash.er.usgs.gov .

The newsletter NEWSBYTES brings you regular reports about prices on used computers from The Boston Computer Exchange (BOCO). The newsletter is available through GEnie, ZiffNet on CompuServe, NewsNet, Dialog, and others.

ZiffNet also offers the Computer Directory, an online encyclopedia with information about more than 75,000 hardware and software products sold in North America (1993). The data base is updated monthly.

Planning your holidays

CompuServe invites you to read reviews of theater performances, books, movies and restaurants, opera, symphonies, ballets, dance, museums and art galleries. They have information about airline

schedules and prices, hotels and the latest ski weather forecast.

Televerket's Datatorg in Norway offers air tickets and hotel reservations through SMART LINK, a self-serve system operated by the Norwegian travel agencies. Entertainment and travel are also popular on Prestel. Most British tour operators have an "office" there.

Several international services, including CompuServe and Dow Jones News/Retrieval, offer OAG (The Official Airline Guide) and Eaasy Sabre (the American Airlines reservation system).

Worldscan/Travel shopper is on CompuServe and Delphi. The Travel Forum on CompuServe administers a member travel discount program. Download HOTEL.SAV in Library 0 for information about lower rates on hotel room and car-rental rates.

It's often possible to book hotel rooms and rent cars online. Travelshopper has a built-in hotel guide, searchable by city around the world. OAG has a database of over 40,000 hotels worldwide (1992). It has the AA Rated European Hotels & Restaurants menu, which covers trips from Andorra to Yugoslavia. Accu-Weather provides three-day weather forecasts for 450 cities worldwide, updated hourly.

Travel agents are also operative through the Internet. One alternative is at TRAVEL@delphi.com . Telnet lib.dartmouth.edu for a World Factbook on countries.

Is this your first visit to Japan? Why not prepare your visit through the online service TWICS in Tokyo. It presents itself like this:

> "Japan is an island nation, full of communities in villages, towns, and cities squeezed in between the mountains and the sea, with ports of various sizes and shapes through which communication flows between communities.
>
> Our own online community is organized in the same terms, an island community "BEEJIMA" (Bee Island), with our village ("MURA"), a port ("MINATO"), and our very own volcanic mountain ("YAMA").
>
> In the village, there is a village office ("YAKUBA"), a community meeting place ("YORIAI"), a high-tech corner ("AKIHABARA") named after the famous electronics district in Tokyo, a health center ("EMEDICA"), a place to hang around and read things ("HON YA"), a school ("GAKKOU"), and a market ("ICHIBA"). The port has holding areas and leads to other parts of Japan ("NIPPON") and the world ("SEKAI"). The mountain has a hot springs ("ONSEN") recreational area, and a lively outdoor bath ("IN THE OFURO") which has become the social center of our island.

Add to this soc.culture.japan on Usenet, the BITNET discussion list JAPAN@NDSUVM1, the Japan Forum on CompuServe, and "JAPAN" on RelayNet.

Did you say the former "Soviet Union?" Here are phone numbers to some "local" bulletin board systems:

Moscow Fair (Moscow):	+7 095 366 5209
SUEARN NIC BBS (Moscow):	+7 095 938 3618
Kreit BBS (Leningrad):	+7 812 112 2611
Amber Way BBS (Vilnius, Lithuania):	+7 012 222 7194
UFO BBS (Riga, Latvia):	+7 013 232 3983
Post Square #1 (Kiev, Ukrain):	+7 044 417 5700

BITNET club TRAVEL-L (TRAVEL-L@TREARN) for those interested in

tourism. ILINK and The Well have conferences under the name TRAVEL.

Many conferences in online land concentrate on particular parts of the world. BALT-L@UBVM.BITNET is focusing on the Baltic states. In AFRICA-L@BRUFPB.BITNET they discuss Africa. On Usenet, the news group is called soc.culture.african.

To brush up your Portuguese, consider joining BRAS-NET, It is a Brazilian mailing list/network. Send your subscription request to bras-net-request@cs.ucla.edu . For general information about other Brazilian interest groups, write LISTSERV@FAPQ.FAPESP.BR .

For those who are into Spanish, why not check out CHILE-L (at LISTSERV@USACHVM1.BITNET), or FOLLAC, a mailing list about 'Folklore Latino, Latinoamericano y Caribeno'. To join, write Emily Socolov at owner-follac@ccwf.cc.texas.edu .

Here are some other African sources: the French language Algeria News List (ALGNEWS) is on LISTSERV@gwuvm.gwu.edu. TUNISNET (on LISTSERV@psuvm.psu.edu) is The Tunisia Network. EGYPT-NET (write: egypt-net-request@das.harvard.edu) is the Egypt Discussion and News forum.

Send mail to mcgee@epsilon.eecs.nwu.edu to get a list of Internet/Bitnet mailing lists that focus on African, African-American, African-Caribbean or African-Latin issues, and a list of African information sites.

In the soc.culture hierarchy on Usenet, you'll find area codes like asian, african, arabic, asean, australian, bangladesh, british, canada, china, celtic, europe, filipino, french, german, greek, hongkong, indian, iranian, italian, jewish, korean, latin-american, lebanon, magyar, nepal, new-zealand, nordic, pakistan, polish, soviet, spain, sri-lanka, taiwan, thai, turkish, vietnamese and yugoslavia.

In "argentina," you can read about how to make empanadas while sharpening up your Spanish before visiting Buenos Aires. (Contact: argentina-request@ois.db.toronto.edu).

CompuServe's Travel Forum has sections called United States, Canada, Mexico/Central America, Caribbean, South America, Oceania, Asia, Europe, Africa/Middle East and Hawaii.

If you're off to London, check out the UK Travel section in CompuServe's UK Computing Forum. Its library contains files with tips about affordable hotels, British road signs, and a list of London theatre shows with ticket-buying tips.

If your destination is Germany, practice Deutch in the Deutches Forum (GO GERNET).

Search for additional background information using CompuServe's Magazine Database Plus, if you don't mind paying a wee surcharge. Look up places to stay in the ABC Worldwide Hotel Listing.

On America Online, you can research National Geographic and National Geographic Traveler Magazines online. You can look up your destination in the electronic Comptons Encyclopedia.

GEnie has a Japan RoundTable and a Deutchland RoundTable. Both provide for interaction with users from those respective countries.

If you are responsible for your company's business travels, check out the following newsletters on NewsNet: BUSINESS TRAVEL NEWS, and TOUR & TRAVEL NEWS. (You can also search NewsNet's newsletters through CompuServe's IQuest, Dialog, and others).

NewsNet has searchable newsletters focusing on the conditions in particular countries or parts of the world (news, travel and political risk analysis, political stability, etc.).

Politics

Many of these conferences and forums are filled to the brim with

political discussions. For information about the United Nations, subscribe to UN (on LISTSERV@INDYCMS.IUPUI.EDU).

Chapter 5: Home, education and work

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House, garden and finances

FidoNet has a long list of interesting conferences:

HOME-N-GRDN	Home and Garden Questions
HOMEAUT	Home Automation
HOMESCHL	Homeschooling support
HOME_IMP	Improvements around the house.
HOME_OFFICE	Home Office
HOME_REPAIR	Home Repair and Remodelling
ZYMURGY	Beer Homebrewing

The EXEC-PC BBS has "Home Repair." The FUTUREHOME TECHNOLOGY NEWS newsletter is available through NewsNet. On ILINK, you will find the HOMEGARDEN conference. Usenet has misc.consumers.house . Here they discuss anything related to owning and maintaining a house. On the Well, check out "Homeowners."

In Ziff-Davis' Magazine Database Plus you can search and read articles from the Good Housekeeping Magazine. This full-text article database is available from CompuServe and other services. Through UUCP you can get to the conference "Antiques" (Contact: antiques-request@swbatl.sbc.com).

CompuServe also has the Gardening Forum. It is operated by the National Gardening Association, which publishes National Gardening magazine.

The various services' software libraries contain many great shareware and public domain programs. You can download software that will help you prepare tax return forms, plan next year's taxes, calculate interests and down-payments on your loans. You'll find double-entry money-managing systems for non-accountants that will help you with personal bookkeeping and checkbook balancing.

Other programs will help you plan and maintain your house. There are personal inventory programs (to help you keep track of belongings), and programs that can help you plan allocation of the space in your home. . .

Join CompuServe's Investors Forum to learn how to play the stock and money markets, and other moneymaking 'instruments'. Discuss investment techniques with others, read reports about economical trends, and retrieve useful programs for your personal computer.

RelayNet offers the international conference INVESTOR. Usenet has misc.invest .

If you want to adopt a child, check out ADOPTION on FidoNet, or subscribe to a UUCP conference of the same name. For access, write adoption-request@think.com . The National Issues Forum on CompuServe has a message section called "Adoption Today."

Addicted TV-viewers may be interested in alt.tv.twin-peaks or alt.tv.muppets on Usenet. "Mystery" on FidoNet and UUCP is for those preferring mystery novels by the fire place in the living room.

There are even offerings for "the perfect house wife." I can think of no better pastime than origami, the traditional Japanese art of folding paper. (Contact: origami-request@cs.utexas.edu on UUCP).

Oh, I almost forgot: The BONSAI conference is essential (on LISTSERV@CMS.CC.WAYNE.EDU). This is where to discuss the art and craft of Bonsai and related art forms. Bonsai is the Oriental Art of miniaturizing trees and plants into forms that mimic nature.

Education, teaching and the exchange of knowledge

The list of conferences, forums, clubs, and other services focusing on education - in its broadest meaning of the word - is long. You are offered online courses, workshops, and seminars for students of all ages, databases to help you select a school for yourself or your kids, and all kinds of discussion forums for educators.

Usenet, BITNET, Internet, and UUCP have long traditions in education. You'll find offerings for teachers within all subject areas, from finance and accounting, through history, languages and geography to technical subjects on all levels.

Two guides listing forums of interest to Educators can be retrieved by anonymous FTP from the pub/ednet directory at nic.umass.edu . Use the following commands (see "FTP by email" at the end of Chapter 12):

```
get educatrs.lst
get edusenet.gde
```

KIDSPHERE (subscribe through JOINKIDS@vms.cis.pitt.edu) is a discussion forum for teachers of students from the age of kindergarten through high school and higher.

This is a selection of other BITNET discussion lists to suggest the span of topics:

CHEMED-L	(CHEMED-L@UWF)	Chemistry Education Discussion
CHRONICL	(CHRONICL@USCVM)	On-Line Chronicle of Higher Ed
CIVIL-L	(CIVIL-L@UNBVM1)	Civil Engineering Research & Ed.
COMLAW-L	(COMLAW-L@UALTAVM)	Computers and Legal Education
DRUGABUS	(DRUGABUS@UMAB)	Drug Abuse Education Information
JOURNET	(JOURNET@QUCDN)	Discussion List for Journalism Ed
MEDIA-L	(MEDIA-L@BINGVMB)	Media in Education
MULTI-L	(MULTI-L@BARILVM)	Language and Education in Multi-Lingual Settings
MUSIC-ED	(MUSIC-ED@UMINN1)	MUSIC-ED Music Education
PANET-L	(PANET-L@YALEVM)	Medical Education and Health Info
TAG-L	(TAG-L@NDSUVM1)	TAG-L Talented and Gifted Ed
WORLD-L	(WORLD-L@UBVM.CC.BUFFALO.EDU)	Non-Eurocentric World History

Here are some Usenet conferences:

comp.edu	Computer science education
sci.edu	The science of education
comp.ai.edu	Applications of Artificial Intelligence to Education

There are many similar offerings on the commercial services and free bulletin boards.

K12Net is a decentralized network for schools available on

FidoNet and Usenet. Write janet.murray@f23.n105.z1.fidonet.org for information.

FidoNet also has

A_THEIST	A_Theism Education and Enlightenment
HIGH_ED	Education, Post Secondary
HISTORY	International History
MAC_GAMES	Macintosh Entertainment & Education

CompuServe has 12 forums focusing on education. Among these you'll find the Disabilities Forum, Computer Training Forum, Education Forum, Education Research forum, Science/Math Educational Forum, Foreign Language Forum, LOGO and Students Forum.

Ken and Carrie Loss-Cutler are coordinating the section for Home/Alternative Education in CompuServe's Education Forum. They educate their two children at home instead of sending them to a public school.

The Foreign Language Forum has the sections Potpourri/Polyglot, Spanish/Portuguese, French, German/Germanic, Latin/Greek, Slavic/E. European, English, East Asian, Esperanto, Others, FL Education, Translators, Computers/CAI-CALL, The Directory, Jobs/Careers, New Uploads and Using the Forum.

If you're into reading/writing the African language Kiswahili (Swahili), write kuntz@macc.wisc.edu to get onto the SWAHILI-L mailing list.

The more occupational oriented forums include Communications Industry Forum, Environmental Forum, Firenet (for volunteer fire brigades), Industrial Hygiene Forum, AAMSI Medical Forum, ASCMD Forum, HealthNet, OP-Net Forum, the MICRO MD Network, Legal SIG, Aviation SIG, CB Society and CEMSIG (computers and electronics).

Bergen By Byte has the Norwegian language conference Schools. This conference is for validated users only.

| There are many private conferences in the online world. All conferences referred to in this book are open for anybody to join, unless explicitly told to be private.

RelayNet has EDUCATION. NewsNet offers the newsletters EDUCATION DAILY, and the HELLER REPORT ON EDUCATIONAL TECHNOLOGY.

Many online services (including schools and universities) offer students accredited courses by modem. Connected Education at the New School for Social Research in the United States is one example, as is the University of Phoenix in Arizona. (Ask in CompuServe's Education Forum for more information.)

The EDUPAGE newsletter is a twice-weekly summary of news items on information technology, provided by a consortium of colleges and universities "seeking to transform education through the use of information technology." Compact and informative. I like it.

To subscribe, send a note to edupage@educom.edu with your name, institution name and email address. (EDUPAGE is also available for Gopher, WAIS and anonymous FTP access on EDUCOM's host machine, educom.edu .)

INFOBITS (at listserv@gibbs.oit.unc.edu) is a monthly service reporting from a number of information and instruction technology sources.

The Internet Resource Directory for Educators is available by anonymous FTP from tcet.unt.edu in the pub/telecomputing-info/IRD subdirectory. File names include:

IRD-telnet-sites.txt	(226KB ASCII text)
IRD-ftp-archives.txt	(73KB)

IRD-listservs.txt (201KB)
IRD-infusion-ideas.txt (202KB)

Example: KIDLINK

Many parents and teachers regard the online world as a learning opportunity for their kids. Some of them turn to KIDLINK, a global service for children between 10 - 15 years of age. The service is operated by a grassroots network of volunteers.

The objective is to get as many children as possible involved in a global dialog.

Participation is free. Before joining the discussion, however, each child must respond to the following four questions:

1. Who am I?
2. What do I want to be when I grow up?
3. How do I want the world to be better when I grow up?
4. What can I do Now to make this come true?

The kids can write in any language. Most answers are sent through the Internet to a large online database in North America. Anyone with an email connection to the Internet can search this database at will.

When they have submitted their responses, they are invited to 'meet' the others in several KIDCAFEs. The cafes are split up by language. Here, they can discuss anything from pop music to how it is to live in other countries.

KIDLINK grew from an idea in 1990 to over 10,000 participating children in 50 countries by May 1993.

Schools all over the globe are integrating KIDLINK with their classes in languages, geography, history, environment, art, etc. To the kid participant, KIDCAFE may be the beginning of a personal network of international friends.

For more information, send mail to LISTSERV@VM1.NODAK.EDU with the following command in the TEXT of your message:

GET KIDLINK GENERAL

Your personal network

Network is a word with many meanings. It can be a system set up to transport data from one computer to another. It can be an online service with many conferences, and a friendly connection between people (like in "old boys' network"). Here, we use it in the latter meaning of the word.

We use our personal networks more than most of us think of. We have a chain of people that we call on to ask for advice, help, and who we invite to participate in projects or parties. When they ask us for assistance, we lend a hand.

The online world has some interesting characteristics. One is that most participants in online conferences already have received so much help from others that they feel obliged to pay back. They do this by helping others.

Those who help, know that helping others will be rewarded. The reward, however, may not come directly from the persons that they help. They contributions help maintain and develop the online world as one giant personal network.

A typical example: I wanted to buy a 425 megabyte hard disk for my Toshiba 5100 personal computer. I discover the existence of such a drive, when a user told about his experiences in CompuServe's

Toshiba Forum. Before placing an order, I wrote to check if he was still satisfied with the disk.

The happy user did more than reply. He told about other sellers and offered to help out with return shipment of my computer when done. He made it clear that he had no financial interest in the companies selling the upgrade. We had no previous contact with each other.

The online world is full of similar examples. The list of what people do to help others is very, very long.

In most conferences and forums you get help, just like that. There is always someone prepared to help.

Still, the best long range strategy to build chances of getting help when you need it, is to be visually present in conferences, that matter to you. 'Being visually present' means that you should contribute in the discussions and help others as much as you can. The p o s i t i v e contributors get a lot of friends and a disproportional amount of help from others.

That is all it takes to build a personal network. One day you may need it. It will give you an incredible advantage. I have seen people get jobs, partners and clients through such contacts. The online world is full of opportunities.

Watch your words

Written communications are deprived of the body language and tone of voice that convey so much in face-to-face meetings and even in telephone conversations. Therefore, it makes sense to work much harder to build in humor, sarcasm, or disagreement and avoid your words come across as stupidity, rudeness, or aggressiveness.

One way of defusing misunderstanding is to include cues as to your emotional state. One popular technique is to use keyboard symbols like :-). We call these symbols emoticons.

What :-) means? Tilt your head to the left and look again. Yes, it's a smiling face.

Here are some other examples to challenge your imagination: ;-) (Winking Smiley), :-((Sad), 8-) (User wears glasses), :-o (Shocked or surprised), and :-> (Hey hey).

A bracketed <g> is shorthand for grin, and <g,d&r> means grinning, ducking, and running. Some people prefer to write their emotional state in full text, like in these two examples: *grin* and *smile*.

Do not misunderstand. You still should not allow yourself to write the most appallingly insulting things to other people, and then try to shrug it off with a <smile>.

Watch your words. They are so easy to store on a hard disk.

Religion and philosophy

CompuServe's Religion Forum (GO RELIGION) has many message sections with associated file libraries. You can get into serious discussion about topics ranging from Christianity, Judaism, Eastern Religions, Islam, Interfaith Dialog, Limbo, Pagan/Occult, to Religion and Science, Liturgical Churches, Mormonism, Ethics and Values, and more. You may also want to check out the New Age Forum.

Usenet's offerings include these:

soc.culture.jewish	Jewish culture & religion.
soc.religion.christian	Christianity and related topics.
soc.religion.eastern	Discussions of Eastern religions.
soc.religion.islam	Discussions of the Islamic faith.
talk.religion.misc	Religious, ethical, & moral implications.

talk.religion.newage	Esoteric and minority religions & philosophies.
alt.pagan	Discussions about paganism & religion.
alt.religion.computers	People who believe computing is "real life."
clari.news.religion	Religion, religious leaders, televangelists.

The BITNET/Internet arena has The Islamic Information & News Net on MUSLIMS (available through LISTSERV@ASUVM.INRE.ASU.EDU). ISLAM-L (on LISTSERV@ULKYVM.LOUISVILLE.EDU) is a non-sectarian forum for discussion, debate, and the exchange of information by students and scholars of the history of Islam.

BUDDHA-L (on LISTSERV@ULKYVM.LOUISVILLE.EDU) provides a means for those interested in Buddhist Studies to exchange information and views. BUDDHIST (on LISTSERV@JPNTUVM0.BITNET) is for non-academic discussions.

BAPTIST (LISTSERV@UKCC.UKY.EDU) is the Open Baptist Discussion List. THEOLOGY (contact U16481%UICVM.BITNET@VM1.NODAK.EDU) is a mailing list dedicated to the intellectual discussion of religion. In its self-presentation, it says:

> Intellectual is stressed as opposed to the "personal," the inspirational, or evangelistic. This does not mean one cannot evangelize, but rather that participants should persuade rather than brow-beat or attack those they disagree with. Arguments are inevitable, but they ultimately should resolve into mutual understanding or at least a truce.

Pagan (Contact: pagan-request@drycas.club.cc.cmu.edu) is set up to discuss the religions and philosophies of paganism. BELIEF-L (on LISTSERV@BROWNVM.BITNET) is designed to be a forum where personal ideologies can be discussed, examined, and analyzed.

The discussion list PHILCOMM@RPIECS.BITNET is where you debate the philosophy of communication. PHILOSOP@YORKVM1.BITNET is the Philosophy Discussion Forum.

Several sacred texts and primary texts of religious interest are available by anonymous FTP or LISTSERV. The Bible, the Book of Mormon and the Koran (also spelled Quran) are available at many sites and in a variety of file formats.

The Bible (King James Version) is available as bible10.zip and bible10.txt via FTP to mrcnext.cso.uiuc.edu (128.174.201.12) in the /extext/etext92/ directory.

M.H. Shakir's translation of the Koran is available as 114 individual ASCII text chapters via FTP to quake.think.com (192.31.181.1) in the /pub/etext/koran/ directory.

A short file containing quotes from the Koran is available via LISTSERV from LISTSERV@asuacad as PAKISTAN AL_QURAN.

A collection of Sanskrit texts is available via FTP to ftp.bcc.ac.uk in the /pub/users/ucgadkw/indology/ directory.

You may use the Archie service (see Appendix 4) to find other religious texts that are also available through the Internet. On FidoNet, check out JVArcServ.

Job-hunting by modem

Unemployment is a global problem, and losing a job is often a bad experience. If this ever should happen to you, consider checking out the BITNET discussion list LAIDOFF@ARIZVM1 - "So, you've been laidoff?"

Maybe you already have a job, but are constantly searching for

something better.

There are many forums and conferences devoted to help you get a new job. FidoNet has the JOBS conference, for those not in a hurry, and JOBS-NOW (Job & Employment offerings/listings) for those who have no more time to wait.

On Bergen By Byte, it is called 'Job_market', and on ILINK CAREER. In many countries there are local bulletin boards operated by public employment agencies.

On Televerket's Datatorg (Norway), you can browse jobs from the following menu (translated):

VACANT JOBS

Select desired profession	Number
01 Technical, natural sciences	(182)
02 Education, etc.	(601)
03 Media,art	(58)
04 Medicine, health care, etc.	(951)
05 Social care	(307)
06 Adm.,management, organization	(348)
07 Finance,computers	(100)
08 Secretarial, office work	(138)
09 Sale,purchasing, advertising	(576)
10 Agriculture,forestry,fishing	(56)
11 Oil and gas, mining	(38)
12 Transport,communication	(68)
13 Workshop,fine mechanics,electro	(126)
14 craft,building and construction	(93)
15 Industry,ware-house,mechan.	(68)
16 Hotel,restaurant,domestic work	(133)
17 Service,surveillance,safety	(170)

If your potential employers have an email address, you can send dozens of job resumes - while going for a cup of coffee!

WORK-AT-HOME on FidoNet is for those planning to start their own business ("Take this job and shove it! I'll work at home!")

CompuServe has the Working-From-Home Forum under the sysopship of online gurus Paul and Sarah Edwards. Its file library contains back issues of the electronic magazine "Making It on Your Own." GEnie has the Home Office Small Business forum (HOSB).

Home based business opportunities may exist within areas such as desktop publishing, desktop video, high-tech equipment repair, import and export management, and professional practice management. Learn from others in forums or conferences on related topics.

The good news is that many organizations are having problems finding qualified candidates for their vacant positions, and that some of them are turning to The Online World for help. One of them did it like this (from an online announcement):

> Because it is difficult to locate qualified candidates for positions in special libraries and information centers, and to assist special librarians and information specialists to locate positions, the student chapter of the Special Libraries Association at Indiana University has formed a LISTSERV, SLAJOB, in connection with the Indiana Center for Database Systems.
>
> The LISTSERV, which is available on both the Internet and Bitnet, will help special libraries and information centers in the sciences, industry, the arts and within public and academic libraries to have a central location for announcing special library and information science positions.

The LISTSERV is available to individuals or organizations that have an Internet or Bitnet network connection. For those on the network, subscribe by sending an email message to:

"LISTSERV@iubvm.bitnet" or "LISTSERV@iubvm.ucs.indiana.edu". Leave the subject line blank and then type the following in the message of the text:

subscribe SLAJOB [firstname] [lastname]

The Israelis have the mailing list CJI, Computer Jobs in Israel. Send mail to LISTSERV@JERUSALEM1.DATASRV.CO.IL with the usual "SUB CJI Your-Full-Name" in the text of your message. This will give you monthly updated lists of open computer jobs.

When you get tired of hunting for a job, why not relax with HUMOR at LISTSERV@UGA.CC.UGA.EDU. This mailing list distributes humor of all types, topics and tastes. To subscribe, send the following command to the LISTSERV:

SUB HUMOR [firstname] [lastname]

Chapter 6: Your personal HealthNet

Health is a concern in most families. Where a family member or a friend is suffering from cancer, AIDS, a serious disability, or a rare disease, finding help is imperative.

Fortunately, there are many sources of information for those who want to know more. There are clubs and forums, where you can meet others with the same disease or problem. They are open 24 hours a day. Those who cannot sleep at night, can log in any time to "talk" with others.

The social aspect of joining a club is important. However, it may be equally important to learn from other people's experiences with alternative treatment methods, doctors, medicines, and to get practical medical advice.

Here are some examples to illustrate the width of the offering:

AIDS

You may start with "The Fog City Online Information Service" in San Francisco, the world's largest bulletin board of AIDS information. The cost of using this BBS from afar may be reduced considerably by using i-Com or similar data transport services (see chapter 13).

CompuServe has a Human Sexuality Forum and a MEDSig with associated file libraries. It also has a surcharged ZiffNet database with full-text articles about health topics (Health Database Plus). On the Well, enter "g aids".

NewsNet has the newsletters "AIDS Weekly" and "AIDS Therapies." The latter is a directory, updated monthly, with descriptions of standard and experimental treatments for AIDS, along with a guide to treatments for the opportunistic infections (OI) of AIDS. It incorporates all existing and potential new AIDS treatments in one place.

On BITNET, check out "AIDS/HIV News" (AIDSNEWS@EB0UB011) and the mailing list on AIDS@EB0UB011.

Usenet has sci.med.aids (AIDS: treatment, pathology/biology of HIV, prevention), bionet.molbio.hiv, clari.tw.health.aids (AIDS stories, research, political issues), and bit.listserv.aidsnews.

If you do not have access to Usenet, send a message to aids-request@cs.ucla.edu for articles from AIDSNEWS, statistics and news summaries.

Aids-stat-request@wubios.wustl.edu is another source of current AIDS statistics. Send a request to info-aids@rainbow.UUCP. It is a clearinghouse of information, and discussion about alternative treatment methods, political implications, and more.

Example: Kidney disease

In chapter 1, I told you that my wife has a rare disease called Polycystic Kidneys. Here are more details about what happened during the "online health trip" to CompuServe with her doctor:

The command "GO HEALTH" gave the following menu:

1 HealthNet
2 Human Sexuality
3 Consumer Health

4 NORD Services/Rare Disease
Database
5 PaperChase (MEDLINE)
6 Information USA/Health
7 Handicapped User's Database
8 Disabilities Forum
9 Aids Information
10 Cancer Forum

Another menu, which listed available "PROFESSIONAL FORUMS," had choices like AAMSI Medical Forum and Health Forum. Besides visiting these, we searched several medical databases.

Menu selection five gave us The National Library of Medicine's database (MEDLINE), which is full of references to biomedical literature. This database had more than five million references to articles from 4.000 magazines from 1966 and up to date, when we searched it in 1991. It increases by some 25.000 new references per month. Easy navigation by menus. Easy to search.

The AAMSI Medical Forum (MedSIG) is sponsored by The American Association for Medical Systems and Informatics (AAMSI). It is a forum for professionals within health care, people within associated technical fields, and ordinary CompuServe users. The members meet to find, develop and swap information.

MedSIG has a library full of programs and information files. This is an example of what you can find there:

ATLAS.ARC 21-Sep-88 30161

Keywords: STEREOTAXIC STEREOTACTIC STEREOTAXIS ATLAS THALAMOTOMY MAP FUNCTIONAL GIF

This contains several of the most useful stereotaxic maps from the Schaltenbrand and Wahren Atlas in GIF format. If you can get GIF into your CAD or drawing program, you can scale the maps to fit your individualized patient's AC-PC distance, thereby generating a customized map for your patient.

CompuServe has many programs for reading GIF files, and converting GIF files to other graphical formats.

Through IQuest, we searched medical databases. Simple menus helped define relevant search terms. When done, IQuest searched selected databases for us, and presented the finds on our local computer screen.

The basic rate for completing the search was US$9.00. In addition, we paid the normal fees for using CompuServe. From Norway, this amounted to around US$ 40/hour at 2400 bps when logging on through the local Infonet node at that time. Today, it costs less.

This gave us up to 10 article headlines, when searching in bibliographic databases. Abstracts of selected articles were displayed on our screen for an additional US$2.00.

We used the search mode "SmartScan" in the area "Medical research." IQuest searched several databases with a minimum of manual intervention.

First, it told us that the following databases would be included in the search:

BRS databases:
Ageline - Contains references to and abstracts of materials on aging and the elderly. Covers psychological, medical, economic, and political concerns.

AIDS Database - Includes critically selected articles covering all aspects of AIDS, (Acquired Immune Deficiency Syndrome), and AIDS-related research.

AIDS Knowledge Base - Provides an online textbook of the most current information on AIDS available from San Francisco General Hospital.

Combined Health Information Database - For professionals, patients, and the general public, CHID contains references to a variety of materials on arthritis, diabetes, health education, digestive diseases, and high blood pressure. Provides abstracts.

Embase - Includes extensive abstracts of articles related to biomedicine from medical journals worldwide. About 40% of the references are online only.

Rehabdata - Covers articles, books, reports, and audiovisual materials dealing with the rehabilitation of the physically and mentally handicapped. References only.

Sport Database - Indexes publications dealing with sports, including training, medicine, education, and history. Drawn mostly from English and French with technical articles from other languages.

Dialog databases:

BioBusiness - Deals with the business aspects of biotechnology and biomedical research. Draws from BIOSIS and MANAGEMENT CONTENTS.

BIOSIS Previews - Provides international coverage of all aspects of biological science.

Cancerlit - Monitors articles from journals and other technical publications dealing with all aspects of cancer research throughout the world. Includes abstracts.

Clinical Abstracts - Covers human clinical study articles of major importance selected from leading medical journals. Includes all aspects of clinical medicine. Corresponds to Abstracts in Internal Medicine. Abstracts available.

Life Sciences Collection - Abstracts technical literature in the life sciences from journals and other scientific publications worldwide.

Medline (1966 - to date) - Indexes articles from medical journals published worldwide. Corresponds to Index Medicus, International Nursing Index and Index to Dental Literature. Includes abstracts in roughly 40% of the records.

SciSearch - Monitors worldwide literature across a wide range of scientific and technological disciplines. Produced by the Institute for Scientific Information (ISI).

Then we entered our search term: "LIVER AND CYST/". The search word "CYST/" signified that "cyst" should match any words starting with these four characters.

While searching, IQuest gave the following progress report:

Scanning BRS databases.

Accessing Network.....Completed.
Accessing Database Host.....Completed.
Logging on.....Completed.
Logging on (second step)....Completed.
Selecting Databases.....Completed.

Each period equals one line
of scanned data. This may take
several minutes.....

It continued in the same way with a "Scanning Dialog databases."
When the search results were presented, we glanced quickly at the article abstracts, ordered two articles to be sent us by mail and typed BYE.

CompuServe reported "Off at 09:12 EST 17-Nov-88 Connect time = 0:35." The two articles arrived Norway by mail a few weeks later.

The whole trip, including visits in medical forums, took 35 minutes. The cost, including local telephone and network charges, was US$95. Of this total cost, the extra cost of searching through IQuest amounted to US$54.00. We all felt that the costs were well justified.

A note about the costs: The online tour was done manually, using full menus. We discussed our search strategy while connected, which is more expensive than logging off to plan the next moves. Also, note that the extra cost of searching IQuest ($54) was not time dependent.

Right now? I have promised to donate one kidney to my wife when the time comes. This has prompted me (1993) to join a mailing list for "Organ transplant recipients and anyone else interested in the issues" (TRNSPLNT@WUVMD.BITNET).

Cancer

FidoNet has the forum CARCINOMA (Cancer Survivors). BITNET has the discussion lists CANCER-L@WVNVM and CLAN (Cancer Liaison and Action Network on CLAN@FRMOP11). CompuServe has a Cancer Forum. NewsNet offers the newsletter CANCER RESEARCHER WEEKLY.

In September 1992, the following message was posted on CANCER-L by a member from Brazil:

> "A close friend was just diagnosed with acute leukemia of a type called calapositive pre-B linphoplastic. It is supposedly an early diagnosis since he is not anemic. We are very shocked but he is reacting quite bravely and all he wants is to have access to literature on his condition. Are there any new genetic engineering developments effectively clinically available? What is the present state of knowledge regarding this specific form of leukemia?
>
> He was diagnosed three hours ago, is 48 yrs old, and will start chemotherapy tomorrow. He was informed that chemotherapy is quite effective in this type of leukemia. But we wonder if there isn't a possibility to use gene therapy.
>
> Any help will be greatly appreciated. - Dora."

There were several helpful replies. This came from a member in the United States:

> "In response to the request for information on treatment for leukemia, I recommend that you access CancerNet, the National Cancer Institute's mail server on the Internet which provides current information on treatment for leukemia. To request the Contents List and Instructions, send a mail message to
>
> cancernet@icicb.nci.nih.gov (Internet address)
> cancernet%icicb.nci.nih.gov@nihcu (BITNET)
>
> Leave the subject line blank, and in the body of the mail

message, enter "HELP". When you receive the Contents list, request the statement for Adult Acute Lymphocytic Leukemia (cn-101024).

There are also News and General Information items, under the Heading PDQ Database Information in the Contents List which provide information on centers which have access to Physician Data Query, NCI's database of cancer treatment information which includes clinical trials information for leukemia. - Cheryl."

CancerNet is the U.S. National Cancer Institute's international information center. It is a quick and easy way to obtain, through electronic mail, recommended treatment guidelines from the National Cancer Institute's Physician Data Query system.

To access CancerNet, send email to:

cancernet@icicb.nci.nih.gov

Leave the subject line blank. In the body of the mail message, enter HELP to receive instructions and the current contents list.

The National Cancer Center in Tokyo Japan has a gopher service at gopher.ncc.go.jp. The World Health Organization (WHO) has one at gopher.who.ch.

Disabilities

Bulletin boards and online conferences give equal access to all persons. Everybody is treated the same way, regardless if they sit in a wheel chair, have a hearing impairment, stutter, cannot speak clearly, have difficulties in thinking or acting quickly, or just have a different looks.

You need not worry about typing errors. Those who read them will never know whether it's because you never learned how to write on a computer, or if it is because you have difficulties in controlling your movements.

You alone decide if others are to know about your personal disability. If you want it to be a secret, then it will remain a secret.

Nobody can possibly know that you are mute and lame from the neck and down, that computer communication is your main gate into the outer world, and that you are writing messages with a stick attached to your forehead. Therefore, the online world has changed the lives of many people with disabilities.

Computer communications have opened a new world for those who are forced to stay at home, or thinks that it is too difficult to travel. Those who can easily drive their car to the library, often have difficulties in understanding the significance of this.

Usenet has alt.education.disabled and misc.handicap. It covers all areas of disabilities, technical, medical, educational, legal, etc. UUCP has handicap. It is presented in the following words:

Contact: wtm@bunker.shel.isc-br.com
Purpose: The Handicap Digest provides an information/discussion exchange for issues dealing with the physically/mentally handicapped. Topics include, but are not limited to: medical, education, legal, technological aids and the handicapped in society.

CompuServe's Disabilities Forum has the following sections: General Interest, Develop. Disabilities, Emotional Disturbances, Hearing Impairments, Learning Disabilities, Vision Impairments, Mobility

Impaired, Rights/Legislation, Education/Employment and Family Life/Leisure.

AUTISM@SJUVM.BITNET is devoted to the developmentally disabled, their teachers, and those interested in this area. The list BLIND-L@UAFSYSB.BITNET focuses on "Computer Use by and for the Blind." COMMDIS@RPIECS.BITNET is a mailing list discussing "Speech disorders."

DEAF-L@SIUCVMB.BITNET is the "Deaf Discussion List," and DEAFBLND@UKCC.UKY.EDU the "Deaf-Blind Discussion List." STUT-HLP (LISTSERV@BGU.EDU) is a support forum for people who stutter and their families.

On L-HCAP@NDSUVM1.BITNET, the focus is on Technology for the handicapped. BACKS-L@UVMVM.BITNET discusses research on low back pain disability.

The Handicap Digest is an electronic mail only digest of articles relating to all types of issues affecting the handicapped. The articles are taken from the Usenet newsgroup, the Handicap News. (misc.handicap) and various FidoNet conferences such as ABLED, BlinkTalk SilentTalk, Chronic Pain, Spinal Injury, Rare Conditions, and several others. Subscribe by email to

wtm@bunker.shel.isc-br.com

Handicap.shel.isc-br.com (129.189.4.184) is the email address to an anonymous ftp site that has disability-related files and programs. The disk has some 40 directories with 500 or so files covering all types of disabilities. (This service can be used through FTPMail. See chapter 12 about how to do this.)

Getting old

BITNET has the "BIOSCI Ageing Bulletin Board" on AGEING@IRLEARN . Usenet has bionet.molbio.ageing, while CompuServe's Issues Forum has a message section called "Seniors."

Ageline on Dialog is a database produced by the American Association of Retired Persons. It does an excellent job covering research about older persons, particularly on consumer issues and health care, by summarizing journal articles and the contents of other published reports.

While our "face-to-face" world sometimes makes it difficult for older people to participate in discussions between young people, this is not so in the Online World. All people are treated the same way. It is impossible for others to know your age, unless someone tells them.

Holistic Healing and Health

HOLISTIC on LISTSERV@SIUCVMB.SIU.EDU is dedicated to "providing information and discussion on holistic concepts and methods of living which provide a natural way of dealing with the challenges of life." Here are some topics dealt with in this forum:

- Various Dimensions of Holistic Healing and Health
- States of Consciousness
- Meditation and the role it plays in spiritual/physical health
- The impact of a healthy diet - including Herbs and Vitamins
- Bodywork - such as Rolfing, Trager bodywork, Reichian, etc.
- Acupuncture/pressure
- Hypnosis and Biofeedback
- Visualizations and Affirmations
- Spiritual Healing - Psychic healing methods

Bioenergetics
The holistic connection between mind and body
Honest discussion of topics relevant to personal/spiritual growth - And anything else within context for the betterment of the world.

The following message is typical:

From: Helen
Subject: Re: Asthma and Sinus Problems
To: Multiple recipients of list HOLISTIC

My condolences to fellow people allergic to cats. Cats and strawberries are two of the most allergenic substances. Behavorial changes have proven to be EVERYTHING to me. The techniques I've employed have helped many others. First, try sleeping at a 45 degree angle. This usually requires piling up pillows. The elevation of the head facilitates drainage from the sinuses. When the situation gets really bad, I've slept sitting up on a couch or arm chair propped up by numerous pillows and cushions. This technique can take some getting used to, but, it works like a charm and is kinder to your system than drug therapy.

Second, try "ephedra" tea. This is an herb found in Chinese herb shops. Ask the herbalist how to prepare it.

I highly recommend the book "Natural Health, Natural Medicine" by Andrew Weil, M.D. of U of A Med School in Tucson. See pages 253-256 for more information on asthma.

Fourth, stay hydrated. This means not only drinking PLENTY of fluids, but humidifying the house (that is if you're not also allergic to molds).

Basic behavorial techniques are important....diet, exercise, etc. etc, ...but this is the holistic network...I'm preaching to the choir...

Finally, take heart! Being allergic to cats is not well received by cat lovers...often we're cat lovers ourselves. Depending on the breed of cat, there is a good chance you will eventually habituate to those you are around over the long term. Good luck, the advice about sleeping with your head significantly elevated is the best I have ever given out to fellow sinus problem sufferers. It really works!!

Helen.

HomeoNet, a service of the Institute of Global Communications (IGC), is for those interested in homeopathic medicine.

List of health science resources

The Bitnet/Internet online list of health science resources is available by email from: LISTSERV@TEMPLEVM.BITNET . Send the following command:

GET MEDICAL RSCRS

This will give a long list of BITNET, Internet, and Usenet forums, data archives, electronic newsletters and journals devoted to health science.

Here are some examples from the list that may be of interest to people not working in the health profession:

* ALCOHOL@LMUACAD.BITNET - a discussion list for Alcohol and Drug Studies,
* BEHAVIOR@ASUACAD.BITNET - Behavioral and Emotional Disorders in Children,
* DIABETIC@PCCVM.BITNET is the "Open Discussion forum for DIABETIC patient counseling,"
* DIARRHOE@SEARN.BITNET (or DIARRHOE@SEARN.SUNET.SE through the Internet) is a forum for information exchange and discussions on all aspects related to diseases, disorders, and chemicals that cause diarrhoea in humans and animals,
* DIET@INDYCMS.BITNET - Support and Discussion of Weight Loss
* DRUGABUS@UMAB.BITNET - Drug Abuse Education Information and Research,
* FAMCOMM@RPIECS.BITNET - Marital/family & relational communication.
* FIT-L@ETSUADMN.BITNET - Wellness, Exercise, Diet, for exchanging ideas, tips and any type of information about wellness, exercise, and diet.
* GRANOLA@BROWNVM.BITNET - Vegetarian Discussion.
* HERB@TREARN.BITNET - Medicinal and Aromatic Plants discussion.
* MSLIST-L@NCSUVM.BITNET - Multiple Sclerosis Discussion and Support.
* RZAMAL-L@DKAUNI11.BITNET - Dental Amalgam Fillings and chronic mercury poisoning.
* SPORTPSY@TEMPLEVM.BITNET - Exercise and Sports Psychology.
* talk.abortion on Usenet.

These mailing lists usually let you search old messages for topics of interest. They are both living discussion forums and interesting searchable databases!

Mednews is a weekly electronic newsletter. Its columns bring regular medical news summaries from USA Today, Center for Disease Control MMWR, weekly AIDS Statistics from CDC, and more. Send the following command to LISTSERV@ASUACAD.BITNET to subscribe:

SUB MEDNEWS Your-first-name Your-last-name

Chapter 7: Electronic mail, telex, and fax

Electronic mail is one of the most popular online services. People living thousands of miles apart can exchange messages and documents very quickly.

International Resource Development, Inc., an American research organization, claimed (1992) that we can send electronic mail to more than 10 million personal mailboxes. We believe the figure to be much higher. The Matrix News (Texas, U.S.A.) claims the number is over 18 million (March 1993).

The Boardwatch Magazine (U.S.A.) believes that new callers are coming online for their first time at a rate of close to 10,000 per day (January 1993).

Electronic Mail & Micro Systems (New Canaan, Conn., U.S.A.) estimated an average of 27.8 million messages sent per month in 1990. Mail through the Internet and grassroots services on free bulletin boards (like FidoNet) is not included in their figure.

The annual rate of increase in the number of messages is over 30% and increasing.

If a given email service charges you US$30 per hour, it will cost you a meager US$0.075 to send one typewritten letter (size A-4, or around 2,200 characters). See chapter 15 for a breakdown of this cost.

If you live in Norway, and send the letter by ordinary mail to a recipient in Norway, postage alone is US$0.53 (1992). The cost is seven times higher than using email.

To send the same letter from Norway to the United States by ordinary mail will cost 11 times more. This letter takes several days to reach the destination, while email messages arrive almost instantly.

Often, you can send email messages to several recipients in one operation - without paying extra for the pleasure. Compare this to sending to several parties by fax!

You do not have to buy envelopes and stamps, fold the sheet, put it into the envelope, and bring it to a mailbox. Just let the computer call your favorite email service to send the letter.

The recipient does not have to sit by the computer waiting for your mail. Upon receipt, it will be automatically stored in his mailbox. He can read it when he has time.

The recipient can print it locally, and it will be a perfect document, no different to one typed in locally. He can also make corrections or comments, and email onwards to a third party. In this way several people can work jointly on a report, and no time is it re-typed from scratch.

When you receive several messages in the morning, you can very quickly create replies to them one at the time at your keyboard, and then send them in one go. No need to feed five different pieces of paper into a fax machine or envelopes for five different people.

Where you can find a telephone, you can also read mail. In most countries, communicating through email is easy and economical.

By the way, the simple but miraculous thing about email is that you can quote easily and exactly the point to which you are replying. This is a revolution in communication, no?

How to send email?

This is what it normally takes for a CompuServe user to send me a message:

> Type GO MAIL to get to the "post office," and then type COMPOSE.
>
> "Start writing," says CompuServe. Type your message manually, or send a file (text or binary). Type /EXIT when done.
>
> "To whom?" asks CompuServe. You enter: "Odd de Presno 75755,1327," or just my mailbox number (75755,1327).
>
> CompuServe asks you to enter Subject. You type: "Hello, my friend!" Your message has been sent.
>
> A few seconds later, the message will arrive in my mailbox. If I am online to CompuServe at the moment, I will probably read it right away. If not, it will stay there until I get around to fetch it.

Above, we used the term "normally takes to send." Please note that many users never ever TYPE these commands! They use various types of automatic software to handle the mechanics of sending and receiving mail (see Chapter 16).

Other systems require different commands to send email. Ulrik

at the University of Oslo (Norway) is a Unix system. So is The Well in San Francisco. On such systems, mail is normally sent using these commands:

Type "mail opresno@extern.uio.no". When the computer asks for "Subject:," enter "Hello, my friend!"

Type your message or send it. When done, enter a period (.) in the beginning of a line. Ulrik will reply with "Cc:" to allow you to 'carbon copy' the message to other people. If you don't want that, press ENTER and the message is on its way.

While I wrote this book, I had to go to Japan. A simple command allowed me to redirect all incoming mail to CompuServe. As a result I could read and send mail by calling a local CompuServe number in several Japanese cities.

Though the commands for sending email differ between systems, the principle is the same. All systems will ask you for an address and the text of your message. On some, the address is a code, on others a name (like ODD DE PRESNO).

Most systems will ask for a Subject title. Many will allow you to send copies of the message to other recipients (Cc:).

Some services allow you to send binary files as email. Binary files contain codes based on the binary numeration system. Such codes are used in computer programs, graphics pictures, compressed spreadsheets and text files, and sound files.

Many online services let you send messages as fax (to over 15 million fax machines), telex (to over 1.8 million telex machines), and as ordinary paper mail. We have tested this successfully on CompuServe, MCI Mail and other services.

On CompuServe, replace "Odd de Presno 75755,1327" with ">FAX: 4737027111". My fax number is +47 370 27111.

On MCI Mail type "CREATE:". MCI asks for "To:," and you type "Odd de Presno (Fax)". MCI asks for "Country:". You enter "Norway". By "RECIPIENT FAX NO" enter "37027111" (the code for international calls). The country code for Norway, 01147, is added automatically. By "Options?," press ENTER. When MCI Mail asks for more recipients, press ENTER. Type your message and have it sent.

To send a telex, you'll need the recipient's telex number, an answerback code, and the code of the recipient's country. If the message is meant for telex number 871161147, answerback ZETO, and country Russia (country code SU), enter ">TLX:871161147 ZETO SU" when sending from CompuServe.

By entering ">POSTAL", CompuServe will send your mail to a business associate in California or Brazil as a professional laser-printed letter. It will take you through the process of filling out the various address lines. The letter may well arrive faster than through ordinary mail.

When the recipient is using another mailbox system

When the recipient is using your mailbox service, writing addresses is simple. Not so when your email has to be forwarded to mailboxes on other online services.

The inter-system email address consists of a user name, a mailbox system code, and sometimes also routing information. The problem is that there is no universal addressing format. Finding out how to write a given address may be surprisingly difficult.

Some services are not set up for exchange of email with other services. This is the case with my bulletin board, the Saltrod Horror Show. To send mail to a user of this system, you'll have to call it directly and enter it there. This bulletin board is not

connected to the outside world for exchange of mail.
    If your favorite system lets you send mail to other services, make a note about the following:

* You need to know the exact address of your recipient, and whether he's using this mailbox regularly. Many users have mailboxes that they use rarely or never. For example, don't try to send mail to my mailbox on Dow Jones/News Retrieval. I only use this service sporadically.
    Think of the easiest way for a recipient to respond before sending a message to him or her.

* You need to know how to rewrite the recipient's address to fit your system. For example, you may have to use a domain address to send through Internet, and a different form when sending through an X.400 network. (More about this later.)

* The recipient's mailbox system may be connected to a network that does not have a mail exchange agreement with your system's network(s). Sometimes, you can use a commercial mail relay service to get your message across (see chapter 9). Users of the Internet can send messages to recipients on the Dialcom network through the DASnet relay service.

* Sometimes, you need to know how to route a message through other systems to arrive at its destination. For example, a message sent from the Ulrik computer in Oslo must be routed through a center in London to get to Dominique Christian on the Difer system in Paris (France),

Internet

is the name of a computer network (here called "INTERNET"), and a term used of a global web of systems and networks that can exchange mail with each other (here called "Internet").
    INTERNET is a very large network that has grown out of ARPANET, MILNET, and other American networks for research and education. This core network has many gateways to other systems, and it's when we include these systems and their connections that we call it the Internet. Others call it WorldNet or the Matrix.
    Internet users can exchange mail with users on networks like EUnet, JANET, Uninett, BITNET, UUCP, CompuServe, MCI Mail, EcoNet, PeaceNet, ConflicNet, GreenNet, Web, Pegasus, AppleLink, Alternex, Nicarao, FredsNaetet, UUNET, PSI, Usenet, FidoNet and many others. We therefore say that these networks are also "on the Internet."
    If you have access to the Internet, you can send email to users of online services all over the world. You can send to people using Bergen By Byte and Telemax in Norway, TWICS in Tokyo, and Colnet in Buenos Aires.
    Now is the time to take a closer look at the art of addressing mail through the Internet.

Domain name addressing

On the Internet, the general form of a person's email address is:

    user-name@somewhere.domain

My main, international Internet mailbox address is:

    opresno@extern.uio.no

You read the address from left to right. First, the local name of the mailbox (my name abbreviated). Next, the name of the mailbox system or another identification code (in this case EXTERN, to show that I have no affiliation with the University), the name of the institution or company (here UIO or "Universitetet i Oslo"), and finally the country (NO for Norway).

People have sent mail to my mailbox from New Zealand, Zimbabwe, Guatemala, Peru, India, China, Greece, Iceland, and Armenia using this address.

Some users must send their messages through a gateway to the Internet. In these cases, the address may have to be changed to reflect this:

Users of AppleLink use opresno@extern.uio.no@INTERNET# . Those on JANET use opresno%extern.uio.no@eanrelay.ac.uk. On SprintMail, use ("RFC-822": <opresno(a)extern.uio.no>, SITE:INTERNET) . CompuServe subscribers use >INTERNET:opresno@extern.uio.no .

The core of these address formats is "opresno@extern.uio.no", in one way or the other.

We call this basic addressing format a Domain Naming System. "EXTERN.UIO.NO" is a domain. The domain may also contain reference to the name of a company or an organization, like in twics.co.jp, compuserve.com, or IGC.ORG. The CO, COM, and ORG codes identify TWICS, CompuServe and IGC as companies/organizations.

To send mail from the Internet to my CompuServe mailbox, use:

    75755.1327@compuserve.com

Normally (except on AppleLink), a domain address can only contain one @-character. When an address has to be extended with gateway routing information, replace all @-characters to the LEFT in the address by %-characters. Here is an example:

BITNET uses a different addressing method (USER@SYSTEM). Let's assume that you are subscribed to the club for lovers of Japanese food (J-FOOD-L@JPNKNU10.BITNET, see chapter 12). You have a mailbox on INTERNET, and want to send a recipe to the other members using the address J-FOOD-L.

On some Internet systems, you can simply use the address: J-FOOD-L@JPNKNU10.BITNET , and your mailbox system will take care of the routing for you.

If this addressing method doesn't work, you can use different gateways into BITNET depending on where you live. The preferred method is to route through a gateway near to you. If living in North America, you may route CUNYVM.CUNY.EDU using the following address:

    J-FOOD-L%JPNKNU10.BITNET@CUNYVM.CUNY.EDU

The rightmost @ in this address is maintained. The one to the LEFT has been replaced with a %. The term ".BITNET" tells the gateway machine where to forward the message.

The following will happen: First, the message will be sent to system CUNYVM at the EDUcation site CUNY. CUNYVM investigates the address, and discovers that the message is for BITNET. It cuts off all text to the right of "JPNKNU10," and replaces the % with an @. The message is forwarded to the mailbox J-FOOD-L on the BITNET system JPNKNU10 at the Kinki University in Japan.

Bang addressing

"Bang" is American for "exclamation point" (!). The UUCP network

uses this variation of the domain addressing scheme.

Example: User Jill Small on Econet in San Francisco used to have the address pyramid!cdp!jsmall . Read this address from right to left. The name of her mailbox is to the right. The name of the organization is in the middle. "Pyramid" is the name of the network.

Some email systems can use bang addresses directly. (Note that the ! character has a special function on Unix computers. Here, you may have to type the address as pyramid\!cdp\!jsmall to avoid unwanted error messages. The \ character tells Unix to regard the next character as a character, and not as a system command. This character may also have to precede other special characters.)

Other systems do not accept bang addresses directly. Here, the users must send such messages through a gateway. The American host UUNET is a frequently used gateway. If routing through UUNET, you may write the address like this:

pyramid!cdp!jsmall@uunet.uu.net

If your system absolutely refuses to accept exclamation points in addresses, try to turn the address into a typical Internet address. Write the address elements in the Internet sequence (left to right). Replace the exclamation points with %-s, like this:

jsmall%cdp%pyramid@uunet.uu.net

This method works most of the time. When it works, use this addressing form. Bang paths may fail if an intermediate site in the path happens to be down. (There is a trend for UUCP sites to register Internet domain names. This helps alleviate the problem of path failures.)

Some messages must be routed through many gateways to reach their destination. This is the longest address that I have used, and it did work:

hpda!hplabs!hpscdc!hp-lsd.cos.hp.com!oldcolo!dave@uunet.uu.net

It used to be the Internet address of a user in Colorado, U.S.A.. Today, he can be reached using a much shorter address.

If you are on UUCP/EUnet, you may use the following address to send email to Odd de Presno:

extern.uio.no!opresno.

Addressing international electronic mail sometimes looks like black magic. To learn more, read some of the books listed in appendix 5. We have found "The Matrix" by John S. Quarterman to be particularly useful.

The conference INFONETS (General network forum) is another source. Here, the INTERNET postmasters discuss their addressing problems. Activity is high, and you will learn a lot about the noble art of addressing. (This is not the place to ask for Olav Janssen's Norwegian email address, though. This question should be sent to a Norwegian postmaster.)

You can subscribe to Infonets by sending the following mail:

To: LISTSERV@NDSUVM1.BITNET
Subject: (You can write anything here. It will be ignored.)
TEXT: SUB INFONETS Your-first-name Your-last-name

If your mailbox is on another network, alter the address to route your subscription correctly to this LISTSERV.

| Hint: You can search the database of old INFONETS messages by email to LISTSERV@DEARN.BITNET. See "Directories of services and subscribers" below for information about how to search LISTSERV databases.

While the global matrix of networks grows rapidly, it is still behind in some lesser-developed nations and poorer parts of developed nations. If interested in these parts of the world, check out GNET, a library and a journal for documents about the efforts to bring the net to lesser-developed nations.

Archived documents are available by anonymous ftp from the directory global_net at dhvx20.csudh.edu (155.135.1.1). Chapter 12 has information on how to use FTP if you only have mail access to the Internet.

To subscribe to a conference discussing these documents, send a request to gnet_request@dhvx20.csudh.edu.

cc:Mail gateways

Many Local Area Networks have been connected to the global Matrix of networks. CompuServe offers a cc:Mail gateway. Lotus cc:Mail is a PC Lan based email system used in corporate, government and other organizations.

When sending from CompuServe Mail to a cc:Mail user through this gateway, a typical address may look like this:

```
>mhs:pt-support@performa
```

To send to this user from the Internet through CompuServe's MHS gateway, write the address like this:

```
pt-support@performa.mhs.compuserve.com
```

Other vendors of LAN gateways use other addressing methods.

X.400 addressing

X.400 is a standard for electronic mail developed by CCITT. It is used on large networks like AT&T Mail, MCI Mail, Sprintnet, GE Information System, Dialcom, and Western Union, and on other public and private networks throughout the world.

EDI (Electronic Data Interchange) uses X.400 as a transport mechanism for coordination of electronic part ordering, stock control and payment. X.400 is used to connect EDI systems between companies and suppliers.

The X.400 addressing syntax is very different from domain addressing. To send a message from an X.400 mailbox to my address (opresno@extern.uio.no), you may have to write it like this:

```
(C:NO,ADMD:uninett,PRMD:uninett,O:uio,OU:extern,S:opresno)
```

Alas, it's not so standard as the domain addressing schemes. On other X.400 networks, the address must be written in one of the following formats - or in yet other ways:

```
(C:US,A:Telemail,P:Internet,"RFC-822":<opresno(a)extern.uio.no>)

("RFC-822": <opresno(a)extern.uio.no>, SITE:INTERNET)
```

'(C:USA,A:TELEMAIL,P:INTERNET,"RFC-822":<opresno<a>extern.uio.no>) DEL'

(site: INTERNET,ID: <opresno<a>extern.uio.no>)

"RFC-822=opresno(a)extern.uio.no @ GATEWAY]INTERNET/TELEMAIL/US"

To send an Internet message to a mailbox I once had on the X.400 host Telemax in Norway, I had to use the following address:

/I=D/G=ODD/S=PRESNO/O=KUD.DATASEKR/@PCMAX.telemax.no

To send from Internet to Telemail in the US, I have used this address:

/PN=TELEMAIL.T.SUPPORT/O=TELENET.MAIL/ADMD=TELEMAIL/C=US/@sprint.com

If you need to route your message through gateways, then complexity increases. One Norwegian UUCP user had to use the following address to get through:

nuug!extern.uio.no!"pcmax.telemax.no!/I=D/G=ODD/S=PRESNO/O=KUD.DATASEKR/"

To send a message from an X.400 system to my CompuServe mailbox, I have used the following address elements:

Country = US
ADMD = CompuServe
PRMD = CSMail
DDA = 75755.1327

The addressing methods used on X.400 systems vary. Another example: Some use the code C:USA rather than the ISO country code C:US. MCI Mail uses C:NORWAY, C:USA, and C:SWEDEN.

Here are some important X.400 codes:

C	the ISO country code (on most services)
ADMD	domain code for public system (abbreviation A)
PRMD	domain code for connected private system (abbreviation P)
O	organization name
OU	organization unit
S	surname (last name)
G	given name (first name)
I	initials (in the name)
DDA	domain-defined attributes, keywords defined and used by the individual systems to specify mailboxes (user name, list, station, user code, etc.), direct delivery devices (attention name, telex addresses, facsimile, etc.)
PN	personal name
(a)	the character @ cannot be used when routing messages from X.400 to Internet. Try (a) instead.
(p)	the character % cannot be used when routing messages from X.400 to Internet. Try (p) instead.
(b)	the character ! (used in "bang" addresses).
(q)	the character " used in email addresses.
RFC-822	this code tells X.400 that an Internet domain address follows. Does not work on all X.400 systems.

Returned mail

When an email address is incorrect in some way (the system's name is wrong, the domain doesn't exist, whatever), the mail system will bounce the message back to the sender.

The returned message will include the reason for the bounce. A common error is addressing mail to an account name that doesn't exist.

Let's make an error when sending to LISTSERV@vm1.nodak.edu. Enter "pistserv@vm1.nodak.edu" instead of "LISTSERV@vm1.nodak.edu".

This address is wrong. Below, we've printed the complete bounced message. It contains a lot of technical information. Most lines have no interest. Also, the message is much larger than the original message, which contained three lines only.

When browsing the bounced message, note that it has three distinct parts: (1) The mail header of the bounced message itself (here, the 13 first lines), (2) The text of the error report (from line 14 until the line "Original message follows:"), and (3) the mailer header and text of your original message (as received by computer reporting the error):

```
From MAILER@VM1.NoDak.EDU Fri Dec 18 12:54:03 1992
Return-Path: <MAILER@VM1.NoDak.EDU>
Received: from vm1.NoDak.edu by pat.uio.no with SMTP (PP)
  id <07610-0@pat.uio.no>; Fri, 18 Dec 1992 12:53:54 +0100
Received: from NDSUVM1.BITNET by VM1.NoDak.EDU (IBM VM SMTP V2R2)
  with BSMTP id 9295; Fri, 18 Dec 92 05:53:27 CST
Received: from NDSUVM1.BITNET by NDSUVM1.BITNET (Mailer R2.07)
  with BSMTP id 3309; Fri, 18 Dec 92 05:53:26 CST
Date: Fri, 18 Dec 92 05:53:26 CST
From: Network Mailer <MAILER@VM1.NoDak.EDU>
To: opresno@extern.uio.no
Subject: mail delivery error
Status: R

Batch SMTP transaction log follows:

220 NDSUVM1.BITNET Columbia MAILER R2.07 BSMTP service ready.
050 HELO NDSUVM1
250 NDSUVM1.BITNET Hello NDSUVM1
050 MAIL FROM:<opresno@extern.uio.no>
250 <opresno@extern.uio.no>... sender OK.
050 RCPT TO:<pistserv@NDSUVM1>
250 <pistserv@NDSUVM1>... recipient OK.
050 DATA
354 Start mail input.  End with <crlf>.<crlf>
554-Mail not delivered to some or all recipients:
554 No such local user: PISTSERV
050 QUIT
221 NDSUVM1.BITNET Columbia MAILER BSMTP service done.

Original message follows:

Received: from NDSUVM1 by NDSUVM1.BITNET (Mailer R2.07) with BSMTP id 3308;
 Fri, 18 Dec 92 05:53:25 CST
Received: from pat.uio.no by VM1.NoDak.EDU (IBM VM SMTP V2R2) with TCP;
   Fri, 18 Dec 92 05:53:23 CST
Received: from ulrik.uio.no by pat.uio.no with local-SMTP (PP)
          id <07590-0@pat.uio.no>; Fri, 18 Dec 1992 12:53:24 +0100
Received: by ulrik.uio.no ; Fri, 18 Dec 1992 12:53:18 +0100
Date: Fri, 18 Dec 1992 12:53:18 +0100
From: opresno@extern.uio.no
```

```
  Message-Id: <9212181153.AAulrik20516@ulrik.uio.no>
  To: pistserv@vm1.nodak.edu
  Subject: test

  index kidlink
```

The first part of the bounced message is usually of no interest. Hidden in the second part you'll find the following interesting line:

```
  554 No such local user: PISTSERV
```

Ah, a typo!

If your original message was long, you're likely to be pleased by having the complete text returned in the third part of the bounced message. Now, you may get away with a quick cut and paste, before resending it to the corrected address.

The text and codes used in bounced messages vary depending on what type of mailbox system you're using, and the type of system that is bouncing your mail.

Above, MAILER@VM1.NoDak.EDU returned the full text of my bounced mail. Some systems just send the beginning of your original text, while others (in particular some X.400 systems) send nothing but a note telling you the reason for the bounce.

```
  | Note: When you fail to understand why a message is being  |
  | bounced, contact your local postmaster for help. Send him |
  | a copy of the complete text of the bounced message up to  |
  | and including the line "Subject:" at the bottom.          |
  |    You do not have to send him the text of your original  |
  | message!                                                  |
```

Replying to an Internet message

On the Internet, electronic messages have a common structure that is common across the network. On some systems, you can reply by using a reply command. If this feature is not available, use the sender's address as given in the mail header.

The bounced message contained two mail headers: the header of my original message (in part three), and the header of the bounced message (in part one).

The 'good' reply address is laid out in the 'From:' header. Thus, this message contains the following two 'good' addresses:

```
  From: Network Mailer <MAILER@VM1.NoDak.EDU>
  From: opresno@extern.uio.no
```

The Network Mailer located the second address line above in my original message, and used this address when sending the bounced message. (Note: there is no point in sending a message back to MAILER@VM1.NoDak.EDU since this is the address of an automatic mail handling program. Write to Postmaster@VM1.NoDak.EDU to talk to a "real person" at this computer center.)

The exact order of a message's header may vary from system to system, but it will always contain the vital 'From:' line.

```
  | Note: Exercise caution when replying to a message sent by  |
  | a mailing list. If you wish to respond to the author only, |
  | make sure that the only address you're replying to is that |
  | person's. Don't send it to the entire list!                |
```

Directories of services and subscribers

There is no complete global directory of available electronic addresses. On many systems, however, you can search lists of local users.

> Normally, you'd be better off by calling the recipient for his or her email address.

Sometimes, the information given you by the recipient is not enough. Maybe the address needs an extension for the message to be routed through gateways to the destination.

Another typical problem is that the syntax of the address is wrong. Perhaps you made a mistake, when you wrote it down (KIDCAFE became KIDSCAFE).

The return address in the received messages' mailer headers may be wrong. It may use a syntax that is illegal on you email system, or it may suggest a routing that is unknown to your system. When trying to send mail to this address, the Mailer-Daemon complains: "This is a non-existent address."

Again, the first person to contact for help is your local postmaster. On most Internet hosts this is simple. If you have a mailbox on the ULRIK computer at the University of Oslo, send a request for help to postmaster@ulrik.uio.no . If you are on COLNET in Buenos Aires, send to postmaster@colnetr.edu.ar .

POSTMASTER is also the address to turn to on BITNET. Users of FidoNet or RelayNet, should write to SYSOP.

It may not be that simple to locate the postmaster on UUCP. The postmaster ID may exist on some systems, but often he's just a name or a user code.

You can get the email address of known Internet systems by sending a message to SERVICE@NIC.DDN.MIL . In the subject of the message, write the command WHOIS host-machine-name. Do not write anything in the text (will be ignored). You will get a report of the desired mailbox computer, and the address of the local postmaster. Example:

```
To:       SERVICE@NIC.DDN.MIL
Subject:  WHOIS AERO.ORG
Text:
```

Sometimes, you just don't know the name of a recipient's mailbox computer. When this is the case, start at the "top of the pyramid."

Say your desired recipient lives in Germany. The ISO country code for Germany is DE (see appendix 6). Send the message

```
To:       SERVICE@NIC.DDN.MIL
Subject:  WHOIS DOMAIN DE
Text:
```

This will give you the email addresses of the main postmasters for this country. Most postmasters are willing to help, but please note that most of them are very busy people. It may take days before they get around to respond to your inquiry.

There are over 100 other "whois-servers" in more than 15 countries. The systems whois.nic.ad.jp and whois.ripe.net cover Japan and Europe. The rest of them provide information about local users. (A list is available via anonymous FTP from sipb.mit.edu in the file /pub/whois/whois-servers.list . Chapter 12 has information about how to get this list by email).

If your recipient is on UUCP, try netdir@mcsun.eu.net . To

locate the postmaster of the mailbox system "amanpt1", use the following format (write nothing in the text):

```
To:       netdir@mcsun.eu.net
Subject:  amanpt1
Text:
```

BITNET provides information about connected systems through many sources. Scandinavian users use LISTSERV@FINHUTC.BITNET in Finland. Try a LISTSERV on a host closer to where you live. For example, North American users may use LISTSERV@NDSUVM1.BITNET, which is a host in North Dakota. Japanese users should write to the host LISTSERV@JPNKNU10.BITNET.

When retrieving for BITNET host information mail, your search will have to be done in two steps. Here, your commands are NOT to be entered on the Subject line. Enter all commands in the TEXT field (text on the Subject line will be ignored). Example:

You want information about the BITNET computer FINHUTC (called a "node in the network"). Your first message should have the following text:

```
// job echo=no
database search dd=rules
//rules dd *
search * in bitearn where node = FINHUTC
index
```

LISTSERV sends you the following report:

```
> search * in bitearn where node = FINHUTC
--> Database BITEARN, 1 hit.

> index
Ref# Conn  Nodeid   Site name
---- ----  ------   ---------
0910 85/11 FINHUTC  Helsinki University of Technology, Finland
```

Send a new search message to the LISTSERV containing the same commands as above. Add one line in which you ask for database record number 0910 (given in the column Ref#). Like this:

```
// job echo=no
database search dd=rules
//rules dd *
search * in bitearn where node = FINHUTC
index
print 0910
```

LISTSERV will return a report with a lot of information. Here is part of it:

```
Node: FINHUTC
Country: FI
Internet: FINHUTC.hut.fi
Net: EARN
Nodedesc: Helsinki University of Technology, Finland
P_hsalmine: Harri Salminen;LK-HS@FINHUTC;+358 0 4514318
P_pautio: Petri Autio;POSTMAST@FINHUTC;+358 0 4514318
```

```
      P_vvoutila: Vuokko Voutilainen;OPR@FINHUTC;+358 0 4514342
      Routtab: RSCS (NETSERV,POSTMAST@FINHUTC)
```

For more information about searching BITNET databases, send this message to your favorite LISTSERV, or use the address below:

```
    To:       LISTSERV@FINHUTC.BITNET
    Subject:  nothing
    TEXT:     GET LISTDB MEMO
```

X.400 systems are developing an address directory according to CCITT standard X.500. The plan is to connect several directories. The developers hope that routing of X.400 messages may eventually be done automatically without the user needing to know the identity of the recipient's mailbox computer.

X.500 will certainly help X.400 users. The problem is that most email is still carried by other types of systems, and that X.500 has no concern for mail transported through "foreign systems."

Dialcom

is a commercial, global online service, which have many nodes in Africa and Latin America. To send mail from Dialcom to the Internet you must use commercial gateway-services like DASnet (see appendix 1).

To send mail from one Dialcom system to another, use the syntax 6007:EWP002. This address points to mailbox EWP002 on system number 6007.

To send mail from Internet to Dialcom user YNP079 on system 10001, use the following address when sending through DASnet:

```
    10001_ynp079@dcdial.das.net
```

Note: Only registered users with DASnet can use this method.

FidoNet

Users of this global network can send and receive mail to/from the Internet. For example, a FidoNet user may use the following method to send to my Internet address:

Send the message to user UUCP at 1:105/42. The first line of the TEXT of the message should contain:

```
      To: opresno@extern.uio.no
```

Add a blank line after the address before entering the text of your message.

FidoNet addresses are composed by three or four numbers;

```
        zone:net/node
        or
        zone:net/node.point
```

The FidoNet address 1:105/42 has three elements. "1:" tells that the recipient lives in Zone number 1 (North America). "105/42" refers to Node number 42, which receives mail through Net number 105. This node has an automatic gateway to the Internet.

Another example: Jan Stozek is sysop of "Home of PCQ" in

Warsaw, Poland. The Node number of his BBS is 10. He receives mail through Net number 480. Poland is a country in Europe, Zone number 2. The address to his system is: 2:480/10. His user name is Jan Stozek.

You can send an Internet message to anyone in FidoNet by using the following template:

<firstname>.<lastname>@p<point>.f<node>.n<net>.z<zone>.fidonet.org

Where <firstname> is the person's first name
<lastname> is the person's last name

To send a message from the Internet to Jan, use this address:

Jan.Stozek@f10.n480.z2.fidonet.org

One final example: Ola Garstad in Oslo has the FidoNet address 2:502/15. Use the address Ola.Garstad@f15.n502.z2.fidonet.org , when sending mail to him through the Internet.

An updated list of global FidoNet nodes can be retrieved from most connected BBS systems.

For more information

If you have access to BITNET or Internet mail, get "The Inter-Network Mail Guide." It describes how to send mail between electronic mail systems like AppleLink, BITNET, BIX, CompuServe, Connect-USA, EasyNet, Envoy, FidoNet, GeoNet, Internet, MCI, MFENET, NasaMail, PeaceNet, Sinet, Span, SprintMail, and more.

Send a message to the BITNET address LISTSERV@UNMVM.BITNET. In the TEXT of the message enter:

GET NETWORK GUIDE

This list is also posted monthly to the Usenet newsgroups comp.mail.misc and news.newusers.questions.

The document "FAQ: How to find people's E-mail addresses" is regularly posted to the Usenet group news.answers. It is also available by email from mail-server@rtfm.mit.edu . To get a copy, put the command "send usenet/news.answers/finding-addresses" in the body of your message.

Chapter 8: Free expert assistance

This may sound too good to be true. Many computer experts are ready to help YOU without asking a dollar in return. The same is the case with experts in other areas.

You have an impossible decision to make. A lawyer has a dotted line that requires your signature, or a surgeon has a dotted line in mind for your upper abdomen. You're not comfortable with the fine print or the diagnosis and wonder if a second opinion is in order. Just ask, and get help.

If you have problems with your communications program, post a message on a bulletin board. Do the same thing if you want to sell equipment. Learn from other people's experiences with computers or

software that you plan to buy.

You will get a reply - if the subject or you attract interest. In the process, you'll get new friends, and be able to follow the development in a dynamic marketplace.

The following message from CompuServe is typical:

16-Nov-91 15:16:14
Sb: Back & Forth software
Fm: Joan Healy
To: John Nelson

Changed my mind about GrandView:

1. Learning curve like Mt. Everest. Give me intuitive or give me death.
2. Lack of patience with " ".
3. Lack of time.
4. It may be unsuited for what I wanted (outlining a book). Since becoming a born-again Galaxian, I've started using that for the outline, and I'm happy. There's nothing like a decision and a permanent bonding and lifelong commitment to make a woman happy. Remember that, you louts. :-)

Many users prefer open conference messages to private email for their technical discussions. This gives "the group" a chance to read, comment, provide additional facts, and return with new questions.

The reactions to one simple question may be overwhelming, but most of the time the contributions are useful and educational. Since the discussion is public, regard it as your personal online university. Offer opinions when you have something to contribute, or keep silent.

In most conferences, some members are critical to "lurkers." A "lurker" is someone who read without ever contributing. Don't let them get to you. Do not feel bad about being silent. Most other members are there only to watch and learn as well.

If you consider buying a newly released computer program, tune in to the section of your favorite online service that deals with products from this manufacturer. Count messages with complaints of the new program before buying.

When you have received your new program, return to read other users' experiences and to pick up practical advice. It will never hurt to offer your own two cents' worth in the process.

Visit online services that have many users who know more than most. There, you will usually get faster and better replies to your questions. It is far cheaper to ask than to search.

Start with bulletin boards. If you have never visited a BBS, call one in your neighborhood to get a feel for what this is. Most of them can be accessed free. Usually, their only requirement is that you answer some self-presentation questions before being granted full access to their system.

Most bulletin boards offer conferencing and archives filled with shareware and public domain software. Many also have files or bulletins listing telephone numbers of other boards in your country or area.

The trick is to find know-how. The larger the online service, the more skilled people are likely to "meet" there regularly. Therefore, if local bulletin boards fail to satisfy your needs,

visit the large commercial services. CompuServe and EXEC-PC are two services in the top league. BIX is another good source of information for professional computer specialists.

One exception: When you need contact with ONE particular person, who knows YOUR problem in detail, go where he uses to go.

Examples: If you need top advice about the communications program GALINK, call Mike's BBS in Oslo (at +472 -416588). If you buy modems from Semafor A/S, the best place for expert advice is Semaforum BBS (tel. +4741-370-11710). If you have a Novell local area network, visit the Novell forums on CompuServe.

For users of MS-DOS computers

I visit the following CompuServe forums regularly:

IBM Communication - about communication software for MS-DOS computers.
IBM Hardware - about new IBM compatibles, expansion cards, displays, hard disks, IBM PS/2, software for performance evaluation, printers, etc.
IBM Systems/Utilities - about DOS, utilities, shells, file utilities, and much more. A large software library.
IBM Applications - about all kind of applications. The forum has a large file library full of shareware and public domain software.

Many CompuServe forums are operated or sponsored by software and hardware vendors, like:

Adobe Systems Inc., Aldus Corp., Ashton-Tate Corp., Autodesk Inc., Borland International, Broderbund Software Inc., Buttonware Inc., Cadkey Inc., Crosstalk Communications, Customs Technologies, Enable Software, Datastorm Technologies Inc., Microsoft Systems, Nantucket Corp., Lotus Development Corp., Novell Inc., Peter Norton Computing, Quarterdeck Office Systems, Quicksoft, Sun Microsystems (TOPS Division), Symantec Corp., Toshiba, Turbopower Software, and WordPerfect Corp.

CompuServe has hundreds of other forums with associated libraries of files and programs.

FidoNet has the PC_TECH and PCUG conferences, and a long list of product specific echos like QUICKBBS, PCTOOLS, ZMODEM, DESQVIEW and WINDOWS.SHAREW .

BITNET has CLIPPER (CLIPPER@BRUFPB), I-IBMPC (I-IBMPC@UIUCVMD), PC-L (PC-L@UFRJ), and the abstract service INFO-IBMPC (IBMPC-L@BNANDP11). On EXEC-PC, look under MS-DOS systems. Usenet has many offerings including the following:

comp.sys.ibm.pc.misc	Discussion about IBM personal computers.
comp.sys.ibm.pc.digest	The IBM PC, PC-XT, and PC-AT. (Moderated)
comp.sys.ibm.pc.hardware	XT/AT/EISA hardware, any vendor.
comp.sys.ibm.pc.rt	Topics related to IBM's RT computer.
comp.sys.ibm.ps2.hardware	Microchannel hardware, any vendor.

For help with Lotus 1-2-3, there are two CompuServe forums. There is a LOTUS conference on RelayNet. WordPerfect Corp. has a support forum on CompuServe. WORDPERF is the equivalent offering on RelayNet. On ILINK, visit WORDPERFECT. For support about Ami Pro, visit CompuServe's LDC Word Processing Forum.

For owners of Amiga computers

FidoNet has a long list of conferences for Amiga users:

AMIGA	Amiga International Echo
AMIGAGAMES	Amiga Gaming
AMIGA_COMMS	Amiga Communications Software and Hardware
AMIGA_DESKTOP	Amiga Desktop Publishing
AMIGA_INFO	AMIGA_INFO
AMIGA_LC	Amiga Lattice/SASC C Echo
AMIGA_NET_DEV	Amiga Network Developers.
AMIGA_PDREVIEW	Amiga PD Reviews & Requests
AMIGA_PERFECT	Amiga Word Perfect & Word Processing
AMIGA_PROG	Amiga Programmer's International Conference
AMIGA_SYSOP	Amiga SysOp's Discussion/ADS Echo
AMIGA_UG	Amiga User's Groups
AMIGA_VIDEO	Amiga Video and Animation

EXEC-PC has the Amiga Hardware and Amiga Software conferences, and a large library with shareware and public domain files. ILINK has the AMIGA conference.

Usenet's com.sys.amiga hierarchy has entries like advocacy, announce applications, audio, datacomm, emulations, games, graphics, hardware, introduction, marketplace, multimedia, misc, programmer, reviews and more.

Abstracts of comp.sys.amiga conferences are available through several BITNET mailing lists, like AMIGAHAR@DEARN, AMIGA-D@NDSUVM1, and AMIGA-S@NDSUVM1.

Most online services have "Find this File" commands. The most powerful ones are often found on free bulletin boards.

On CompuServe, type GO AMIGA to get to CBMNET and get the following welcome menu:

```
Amiga Forums
 1 Amiga Arts Forum
 2 Amiga Tech Forum
 3 Amiga User's Forum
 4 Amiga Vendor Forum
 5 Amiga File Finder

Commodore Forums
 6 Commodore Arts and Games
 7 Commodore Applications Forum
 8 Commodore Service Forum
 9 Commodore Newsletter
```

A while ago, we visited CBMNET to find a communications program. From the menu above, selection five took us to The Amiga File Finder service, and this menu:

```
File Finder AMIGA

 1 About File Finder
 2 Instructions For Searching
 3 How to Locate Keywords

 4 Access File Finder

 5 Your Comments About File Finder
```

Choice four lets us search for files using keywords, file creation

dates, forum names, file types, file name extension, file name or author. Our choice was searching by keywords. The result was a long list of alternatives:

```
   Enter Search Term: comm

   Amiga File Finder

    1 AMIGATECH/C Programming  COMSRC.ARC
    2 AMIGATECH/C Programming  PMDSRC.LZH
    3 AMIGATECH/C Programming  PNTSRC.LZH
    4 AMIGAUSER/Communications  BBSIND.LZH
    5 AMIGAUSER/Communications  INTOUC.ARC
    etc.
```

By entering numbers, we asked for short descriptions of file number 4 through 13. Here is one of them:

```
   Filename : INTOUC.ARC  Forum: AMIGAUSER
   Lib: Communications  Lib #: 5
   Submitter: [76702,337]   24-Mar-89
   Size: 51200   Accesses: 157

   This is a modified Comm1.34.  It supports both VT100 and ANSI.
   The VT100 emulation is based on Dave Wecker's VT100 program.
   There is automatic dialer, split screen that is configurable,
   phone book, and other nice features.
```

This is what we were looking for. First, enter GO AMIGAUSER to get to the forum. Enter "DL 5" to get to Downloading Library number 5. INTOUCH.ARC was retrieved using the CompuServe Quick B transfer protocol. This protocol is usually the most efficient choice on this service.

There are also active Amiga forums on BIX, GEnie, and CIX (England).

Apple users

FidoNet has an APPLE conference. BITNET has APPLE2-L (APPLE2-L@BROWNVM). CompuServe has Apple II Programmers Forum, Apple II Users Forum, Apple II Vendor Forum, Mac Community Clubhouse Forum, Mac Developers Forum, Mac Fun/Entertainment Forum, Mac Hypertext Forum, Mac New Users/Help Forum, Mac System 7.0 Forum, Mac System Software Forum, MacUser Forum and MacWEEK Forum.

Similar services are found on many other online services. You will also find conferences devoted to support of popular commercial software for Apple computers.

Other computers

There are so many types of computers: Atari computers, the TRS-80 series and others from Tandy, DEC computers, mainframes from IBM, Hewlett-Packard computers, CP/M machines, users of LDOS/TRSDOS or OS9, Apricot, Z88, Timex/Sinclair, Archimedes, Psion, and Armstrad.

Even so, there is a high probability that you can find online support for almost all of them. This is so even if the vendor is out of business long ago. CompuServe is a good place to start.

Chapter 9: Your electronic daily news

==========

Read national and global news before they are announced by the traditional media. Get those interesting background facts. Read special interest news stories that seldom appear in print.

Sure, you read newspapers, watch TV, and listen to radio. But did you know how limited their stories are?

Traditional news media just give you a small part of the news. Their editors are not concerned about YOUR particular interests. They serve a large group of readers, viewers or listeners with different interests in mind.

Go online to discover the difference. The online news has an enormous width and depth. Besides "popular" news, you will find stories that few editors bother to print. This may give you better insight in current developments, and in as much details as you can take.

Most commercial online services offer news. Most of their stories come from large news agencies and newspapers. You can also read and search articles from magazines, newsletters and other special publications.

The online users' ability to search today and yesterday's news makes these offerings particularly useful.

The cost of reading a given news item varies by online service. What will set you back 20 cents on one service, will cost you two dollars on another.

It may be many times more expensive (or cheap) to read the same article from the same news provider on another online service. So, professional online users compare prices.

National news

In Norway, we have long been able to read local language news from print media like Aftenposten, Dagens Naeringsliv, Kapital, and news wires from NTB and other local sources. Similarly, local language news is available online in most countries.

The cost of reading local news on national online services tends to be more expensive than on major global online services. As competition among global news providers increases, however, this is bound to change.

International news

"The Global Village" is an old idea in the online world. News from most parts of the world has long been globally available.

A while ago, a well-known Norwegian industrialist visited my office. I showed off online searching in NewsNet newsletters and stumbled over a story about his company. "Incredible!" he said. "We haven't even told our Norwegian employees about this yet."

Often, American online services give news from other countries earlier you can get it on online services from these countries. Besides, the stories will be in English.

| In 1991, the United States had 56 percent of the world's online databases (Source: the research company IQ, September 1991). |

Sure, most Norwegians prefer to read news in Norwegian. The

Japanese want news in their language, and the French in French. If they can get the news earlier than their competitors, however, most are willing to read English.

Few master many languages. Unless you live in a country where they talk Arabic, Chinese or French, chances are that you cannot read news in these languages. English, however, is a popular second choice in many countries, and it has become the unofficial language of the online world.

Another thing is that reading local language news is risky. Translators often make mistakes. One reason is time pressure, another poor knowledge of the source language.

The risk of inaccuracies increases when a story, for example initially translated from Spanish into English, then are being translated into a third language.

Avoid news that has been translated more than once. If not, you may experience something like this:

> On September 19, 1991, Norwegian TV brought news from Moscow. They told that Russian president Boris Yeltsin had a heart attack.
>
> The online report from Associated Press, which arrived 7.5 hours earlier, talked about "a minor heart attack" with the following additional explanation: "In Russian, the phrase 'heart attack' has a broader meaning than in English. It is commonly used to refer to a range of ailments from chest pains to actual heart failure."

Your "personal online daily newspaper" will often give you the news faster and more correctly than traditional print media. Some news is only made available in electronic form.

Seven minutes in 1991

On September 19, I called CompuServe to read news and gather information about online news sources.

According to my log, I connected through Infonet in Oslo (see Chapter 13). The total cost for seven minutes was US$6.00, which included the cost of a long distance call to Oslo.

I read some stories, while they scrolled over the screen. All was captured to a file on my hard disk for later study. The size of this file grew to 32.000 characters, or almost 15 single-spaced typewritten pages (A-4 size). If I had spent less time reviewing the lists of available stories, seven minutes would have given a larger file.

When I had entered my user ID and password, a menu of stories came up on my screen. The headline read "News from CompuServe."

The two first items caught my attention, and I requested the text. One had 20 lines about an easier method of finding files in the forum libraries. The other had ten lines about how to write addresses for international fax messages.

The command GO APV brought me directly to Associated Press News Wires. You'll find such tricks by reading the online services' user manuals. This command produced the following menu:

```
AP Online                  APV-1

 1 Latest News-Updated Hourly
 2 Weather
 3 Sports
 4 National
```

5 Washington
6 World
7 Political
8 Entertainment
9 Business News
10 Wall Street
11 Dow Jones Average
12 Feature News
13 Today in History

I entered "9" for business news, and got a new list of stories:

AP Online

1 Women, Minority Businesses Lag
2 Child World Accuses Toys R Us
3 UPI May Cancel Worker Benefits
4 Drilling Plan Worries Florida
5 UK Stocks Dip, Tokyo's Higher
6 Dollar Higher, Gold Up
7 Farm Exports Seen Declining
8 Supermarket Coupons Big Bucks
9 Cattlemen Tout Supply, Prices
0 Tokyo Stocks, Dollar Higher

MORE !

The screen stopped scrolling by "MORE !". Pressing ENTER gave a new list. None of them were of any interest.

Pressing M (for previous menu) returned me to the APV-1 menu (the videotext page number is given in the upper right corner of each menu display). I selected "World" for global news, which gave me this list:

AP Online

6 Two Killed In Nagorno Karabakh
7 Yugoslavia Fighting Rages On
8 Storm Kills Five In Japan
9 Afghan Rebels Going To Moscow?
0 19 Killed in Guatemala Quakes

MORE !8

Oh, a storm in Japan! Interesting. I was due to leave for Japan in a couple of weeks, and entered 8 at the MORE ! prompt to read. A screenful of text was transferred in a few seconds.

"This is for later study," I said, pressed M to return to the menu, and then ENTER to get the next listing:

AP Online

1 Bomblets Kill American Troops?
2 No Movement On Hostage Release
3 Baker Plans Return To Syria
4 Baker, King Hussein To Confer
5 Madame Chiang Leaving Taiwan?
6 Baker Leaves Syria for Jordan
7 Klaus Barbie Hospitalized

```
    8 Iraq Denounces U.S. Threat
    9 Yelstin Said Resting At Home
    0 SS Auschwitz Guard Found Dead

    MORE !
```

Here, I used another trick from the user manual. Entering "5,6,9" gave three stories in one batch with no pauses between them. Five screens with text. If I had read the menu more carefully, I might probably also have selected story 0. It looked like an interesting item.

"This is enough of the Associated Press," I thought, and typed G NEWS. This gave me an overview of all available news sources ("G NEWS" is an abbreviation for "GO NEWS," or "GO to the main NEWS menu"):

```
    News/Weather/Sports         NEWS

     1 Executive News Service ($)
     2 NewsGrid
     3 Associated Press Online
     4 Weather
     5 Sports
     6 The Business Wire
     7 Newspaper Library
     8 UK News/Sports
     9 Entertainment News/Info
    10 Online Today Daily Edition
    11 Soviet Crisis
```

First, a quick glance at 6. The service presented itself in these words: "Throughout the day The Business Wire makes available press releases, news stories, and other information from the world of business. Information on hundreds of different companies is transmitted daily to The Business Wire's subscribers."

Then #7: "This database contains selected full-text stories from 48 newspapers from across the United States. Classified ads are NOT included in the full-text of each paper."

The list of newspapers included Boston Globe, Chicago Tribune and San Francisco Chronicle (known for many interesting inside stories from Silicon Valley).

Choice 8 gave news from England. There, I selected UK News Clips, which gave the following options:

```
  U.K. News Clips

   93 stories selected

   1 RTw  09/19 0818  YUGOSLAV AIR FORCE HITS CROATIAN COMMUNICATIONS
   2 RTw  09/19 0755  CROATIA BATTLES CONTINUE AS EC PONDERS PEACE FORCE
   3 RTw  09/19 0753  ARAB PAPERS SAY MOSCOW WANTS MIDEAST PARLEY DELAYED
   4 RTw  09/19 0749  DOLLAR STANDS STILL, SHARES DRIFT LOWER IN ...
   5 RTw  09/19 0729  EARNINGS GLOOM REVERSES LONDON STOCKS' EARLY GAINS
   6 RTw  09/19 0716  SOVIETS NEED 14.7 BILLION DOLLARS FOOD AID, EC SAYS
   7 RTw  09/19 0707  IRA SAYS IT KILLED TIMBER YARD WORKER IN BELFAST DOCKS
   8 RTw  09/19 0706  BRITISH CONSERVATIVE CHIEF PLAYS DOWN TALK OF ...
   9 RTw  09/19 0630  FINANCE RATES
  10 RTw  09/19 0603  REUTER WORLD NEWS SCHEDULE AT 1000 GMT THURSDAY ...
```

The numbers in column four are the release times of the stories.

They flow in from the wires in a continuous stream.

Next stop was the UK Newspaper Library. Here, you can search in full-text stories from The Daily and Sunday Telegraph, Financial Times, The Guardian, UK News (with selected stories from The Daily & Sunday Telegraph, Financial Times, The Guardian, The Times/Sunday Times, Today, The Independent, Lloyd's List and The Observer).

Searching the UK Newspaper Library costs US$6.00 for up to ten hits. You get a selection menu of the first ten stories found. A menu with an additional ten stories costs another $6.00, etc. You pay US$6.00 to read the full text of selected stories. These rates are added to CompuServe's normal access rates.

The news service Soviet Crisis was my final destination. This was just a few weeks after the attempted coup in Moscow, and I was eager for reports.

I found the following interesting story from OTC NewsAlert:

OTC 09/19 0750 FIRST ENGLISH LANGUAGE SOVDATA DAILINE IS LAUNCHED

This selection gave me three screens with information about a new online service. Briefly, this is what it said:

> "The SovData DiaLine service includes an on-line library of more than 250 Soviet newspapers, business and economic periodicals, profiles of more than 2,500 Soviet firms and key executives that do business with the West, legislative reports and other information."

It also said that part of the database was available through Mead Data Central (Nexis/Lexis), and that it would be made available through like Data-Star, FT Profile, Reuters, Westlaw, and GBI. Undoubtedly, the name has changed by the time you read this.

Finally, a fresh story about the fate of KGB. I read another fifty lines, entered OFF (for "goodbye CompuServe"), and received the following verdict:

```
Thank you for using CompuServe!

Off at 09:03 EDT 19-Sep-91
Connect time = 0:07
```

Seven minutes. Fifteen typed pages of text. US$6.00. Not bad!

An overwhelming choice

I am confident that your "daily online newspaper" will contain other stories. If you're into computers, you may want to start with Online Today, CompuServe's daily newspaper. It brings short, informative news stories about the computer industry.

NewsBytes is another interesting source for computer news. It offers global headline news from its bureaus around the world. The articles are sorted in sections called APPLE, BUSINESS, GENERAL, GOVERNMENT, IBM, REVIEW, TELECOM, TRENDS and UNIX. A favorite!

Newsnet is also available through Genie, ZiffNet on CompuServe, NewsNet, Dialog, in the newsgroup clari.nb on Usenet, and various BBS systems around the world. I read it through a Norwegian BBS (EuroNet in Haugesund).

For general news, start with major newswires, like Associated Press, Agence France-Presse, Xinhua, Reuters, and the like. You will find them on many commercial services including NewsNet, CompuServe, and Dialog.

FROGNET - The French Way

If you know French, check out FROGNET. This French language service brings daily news from Agence France Press, and often has added excerpts from the French dailies.

FROG is distributed by the services of the French embassy in Washington. It covers world affairs, European and French items, assembled, naturally, from a French point of view.

The service is free. To subscribe, send a message through the Internet to FROG@GUVAX.GEORGETOWN.EDU . It should contain your answers to the following electronic application form. Replace the %s with your inputs (This is French, right?):

```
NOM:   %
PRENOM:  %
NAISSANCE:../../..%
ARRIVEE:../../..%
DEPART:../../..%
EMAIL:    %
ECOLE D'ORIGINE:  %
QUALITE:  %
ADRESSE DE RECHERCHE:   %
PAYS:   %
STATE:     %
UNIVERSITE:   %
RECHERCHE:   %
MOTSCLES:   %
DOMAINE:  %
```

Complicated? OK, here's some instructions in "French ASCII":

* Pour les dates veuillez utiliser le format Francais (DD/MM/YY). Arrivee: c'est la date d'arrivee dans le pays ou vous etes actuellement.
* QUALITE: Etes vous VSN, PHD, MASTER, INGENIEUR, POST-DOC ...?
* ECOLE D'ORIGINE: Diplome obtenu en France
* PAYS: US, Australie ....
* STATE: pour les US en 2 lettres (NY, TX, CA)
* UNIVERSITE: actuelle ou societe
* RECHERCHE: Soyez explicite !
* MOTSCLES: (ex: Neuronaux, polymeres, TVHD...)
* DOMAINE: En 3 lettres confere nomenclature ci-dessous

Nomenclature de la National Science Foundation.

AGR	AGRICULTURE
BIO	BIOLOGICAL SCIENCES
HES	HEALTH SCIENCES
ENG	ENGINEERING
CIS	COMPUTER AND INFORMATION SC.
MAT	MATHEMATICS
PHY	PHYSICAL SCIENCES
AST	Astronomy
ATM	Atmospheric & Meteorological Sciences
CHE	Chemistry
GEO	Geological Sciences
PHS	Physics
OPH	Other Physical Sciences
PSY	PSYCHOLOGY
SOS	SOCIAL SCIENCES

HUM	HUMANITIES
HIS	History
LET	Letters
FLL	Foreign Languages & Literature
OHU	Other Humanities
EDU	EDUCATION
EDG	Education General
TED	Teacher Education
TEF	Teaching fields
PRF	PROFESSIONAL FIELDS
BUS	Business & Management
COM	Communications
PFO	Other Professional Fields
OTH	OTHER FIELDS

News is more than news

After some time, your definition of the notion "news" may change. Since so many conferences are interesting sources, they should also be a part of your news gathering strategy. Check in regularly to read what members report about what they have seen, done, heard, or discovered.

By the way, professional news hunters have also discovered this. Online conferences are popular hunting grounds for reporters of the traditional press.

FidoNet has many conferences with specialized news contents:

ANEWS	News of the US and World
BBNS	BBS News Service
BIONEWS	Environmental News
EL_SALVADOR	Analysis and News About El Salvador
NICANET	Analysis and News About Nicaragua
PACIFIC_NEWS	Pacific News
PANAMA	Analysis and News About Panama

BITNET has mailing lists like:

CHINA-NN	CHINA-NN@ASUACAD	China News Digest (Global News)
CURRENTS	CURRENTS@PCCVM	South Asian News and Culture
INDIA-L	INDIA-L@TEMPLEVM	The India News Network
PAKISTAN	PAKISTAN@ASUACAD	Pakistan News Service
SEDSNEWS	SEDSNEWS@TAMVM1	News about Space from SEDS
TSSNEWS	TSSNEWS@PSUVM	Tunisian Scientific Society News

RFERL-L (on LISTSERV@UBVM.CC.BUFFALO.EDU) distributes the RFE/RL Research Institute Daily Report. It is a digest of the latest developments in the former Soviet Union and Eastern Europe. The report is published Monday through Friday by the RFE/RL Research Institute, a division of Radio Free Europe/Radio Liberty Inc. in Germany.

Some mailing lists bring a steady flow of news from various sources. SEASIA-L@MSU - The Southeast Asia Discussion List - is one example. The list is "designed to facilitate communication between researchers, scholars, students, teachers, and others interested in Southeast Asian studies with an emphasis on current events."

SEASIA-L defines Southeast Asia loosely as Burma/Myanmar across to Hong Kong and down through Australia and New Zealand. Regularly, it brings full-text news stories from Inter Press Service, regional news agencies, and newspapers/radio. Some examples:

On Jul. 30, 1992, a full-text story from IPS: "PHILIPPINES: RAMOS URGES REPEAL OF ANTI-COMMUNIST LAW." On Aug. 13, 1992, full-

text story from The New Straits Times (Singapore): "Schoolgirs involved in flesh trade, says Farid." On Aug. 31, "ANTI-VIETNAMESE FORCE TURNS UP IN CAMBODIA" (Reuter).

SEASIA-L also brings "underground" reports like "The Burma Focus," a bimonthly newsletter published by the All Burma Students' Democratic Front.

ECUADOR brings news from Ecuador. Daily news bulletins from "Diario Hoy" are posted to the list. Send rone@skat.usc.edu your subscription request.

Many CompuServe forums have news sections. If you're into Hot News and Rumors about Amiga Computers, read messages in section 3 of the Amiga Tech Forum.

Consumer Electronics Forum has the section "New Products/News." The Journalist Forum has "Fast Breaking News!" The Motor Sports Forum has "Racing News/Notes." The Online Today Forum has "In the News."

NewsNet's list of newsletters that you can read or search online is long, and back issues are also available. For example:

> Africa News, Agence France-Presse International News, Applied Genetics News, Asian Economic News, Asian Political News, Business Travel News, Catholic News Service, CD Computing News, Computer Reseller News, Electronic Materials Technology News, Electronic Trade & Transport News, Electronic World News, High Tech Ceramics News, Inter Press Service International News, International Businessman News Report, News From France, Northern Ireland News Service, Online Product News, Sourcemex -- economic news on Mexico, and XINHUA English language news service (China).

The Inter Press Service's newsletter International News focuses on Third World countries, and news from Europe/North America of interest to these countries (also available through Impress on Nexis).

Usenet brings news from Bangladesh, India and Nepal in misc.news.southasia. The ClariNet hierarchy gateways newsgroups from commercial news services and "other official" sources, like:

biz.commodity	Commodity news and price reports.
feature	Feature columns and products
canada.briefs	Regular updates of Canadian News in Brief.
biz.economy	Economic news and indicators
biz.top	Top business news
books	Books & publishing.
briefs	Regular news summaries.
bulletin	Major breaking stories of the week.
consumer	Consumer news, car reviews etc.
demonstration	Demonstrations around the world.
disaster	Major problems, accidents & natural disasters.
economy	General economic news.
entertain	Entertainment industry news & features.
europe	News related to Europe.
fighting	Clashes around the world.
hot.east_europe	News from Eastern Europe.
hot.iraq	The Gulf Crisis
hot.panama	Panama and General Noriega.
news.top	Top US news stories.
news.top.world	Top international news stories.
news.trends	Surveys and trends.
news.urgent	Major breaking stories of the day.

A feed of ClariNet news is available for a fee and execution of a license. (Write info@clarinet.com for information.)

UUCP has which brings regular news bulletins from Poland (Contact: przemek@ndcvx.cc.nd.edu).

Behind the news

In an effort to garner new subscribers and retain current readers, magazine publishers turn to online services to create an ancillary electronic version of their print product.

Their readers are being transformed from passive recipients of information into active participants in publishing.

You can "talk" to BYTE's writers on BIX, and with PC Magazine's writers through ZiffNet on CompuServe. Their forums function as expert sources. Here, you will often learn about products and trends sometimes before the magazines hit the newsstand.

InfoWorld, an American computer magazine, runs the InfoWorld OnLine service on CompuServe. Enter GO INF to get to the following menu:

```
InfoWorld On-Line      INFOWORLD

WELCOME TO INFOWORLD
 1 About InfoWorld Online
 2 Read Current Week's News -  1/13/92
 3 Read Prior Week's News   -  1/06/92
 4 Download Current Week's Reviews,
    Comparisons and Test Drives ($)
 5 Download Prior Week's Reviews,
    Comparisons and Test Drives ($)
 6 Searching Help
 7 Search Review/Comparisons/
    Impressions/Test Drives
 8 Comments to InfoWorld
```

InfoWorld highlights comprehensive computer product comparisons and reports. You can browse this or previous weeks' comparisons and reviews, or search the entire collection. You can search by company name, product, software and hardware category.

Britain's two best-selling PC magazines share the PC Plus/PC Answers Online forum on CompuServe (GO PCPLUS).

PC Magazine, another American magazine, has several forums on CompuServe. They also operate a bulletin board. People from AI Expert Magazine can be encountered in the AI Expert Forum. Dr. Dobb's Journal is in the Dr. Dobb's Journal Forum.

The Entrepreneur's Small Business Forum (CompuServe) is managed by representatives from the magazine. Live Sound!, a magazine devoted to the MIDI sound field, occupies section and library 9 of the MIDI B Vendor Forum.

Time magazine has a forum on America Online. There, readers can discuss with magazine reporters and editors, and even read the text of entire issues of Time electronically before it is available on newsstands.

The Online World shareware book, the one you're reading just now, also has a forum. For information about how to join, send email to LISTSERV@vm1.nodak.edu (or LISTSERV@NDSUVM1 on BITNET). In the text of your message, write the command "GET TOW MASTER".

Chapter 10: Looking for a needle in a bottle of hay

==========

Experienced users regularly clip news from online services, and store selected parts of it on their personal computers' hard disks. They use powerful tools to search their data, and know how to use the information in other applications.

Regular clipping of news is highly recommended. It is often quicker and easier to search your own databases than to do it online.

Since your data is a subset of previous searches, your stories are likely to have a high degree of relevancy.

There are many powerful programs for personal computers that let you search your personal data for information. Read Chapter 14 for more on this.

While secondary research can never replace primary information gathering, it often satisfies most information needs related to any task or project. Besides, it points in the direction of primary sources from where more in-depth information may be elicited.

When your personal database fails to deliver

Regular "clipping" can indeed help you build a powerful personal database, but it will never satisfy all your information needs. Occasionally, you must go online for additional facts.

When this happens, you may feel like Don Quixote, as he was looking "for a needle in a bottle of hay." The large number of online offerings is bewildering. To be successful, you must have a sound search strategy.

Your first task is to locate useful SOURCES of information. The next, to decide how best to find that specific piece of information online. You must PLAN your search.

Although one source of information, like an online database, is supposed to cover your area of interest, it may still be unable to give you what you want. Let me explain with an example:

> You're tracking a company called IBM (International Business Machines). Your first inclination is to visit forums and clubs concerned with products delivered by this company. There, you plan to search message bases and file libraries.
>
> What is likely to happen, is that the search term IBM gives so many hits that you almost drown. To find anything of interest in these forums, your search terms must be very specific.
>
> General news providers, like Associated Press, may be a better alternative. Usually, they just publish one or two stories on IBM per week. Don't expect to learn about details that are not of interest to the general public.
>
> AP's stories may be too general for you. Maybe you'll be more content with industry insiders' expert views, as provided by the NewsNet newsletters OUTLOOK ON IBM, or THE REPORT ON IBM.

The level of details in a given story depends in part on the news providers' readers, and the nature of the source. The amount of "noise" (the level of irrelevancy) also varies. In most public forums, expect to wade through many uninteresting messages before finding things of interest.

We suggest the following strategy:

Step 1: Locate sources that provide relevant information,

Step 2: Check if the information from these sources is at a satisfactory level of details, and that the volume is acceptable (not too much, neither too little).

Step 3: Study the service's search commands and procedures, PLAN, and then SEARCH.

Start by asking others!

Step 1 is not an easy one. Start by asking other online people for advice. This may be the fastest way to interesting sources.

If looking for information about agriculture and fisheries, visit conferences about related topics. Ask members there what they are using.

If you want information about computers or electronics, ask in such conferences.

> When you don't know where to start your search, ask others! Their know-how is usually the quickest way to the sources.

If this doesn't help, check out GEnie's Home Office/Small Business RoundTable, a hangout of online searchers. Visit CompuServe's Working From Home Forum, which has a section for information professionals (#4), and the section for new librarians in the Journalism Forum.

Patent searchers are a very specialized group. They discuss common problems on Dialog's DialMail. Their bulletin board is named PIUG.

Buy user manuals

Some online services send free user information manuals to their users. Others charge extra for them. If they do, buy! They're worth their weight in gold.

The user manuals from Dialog, Dow Jones News/Retrieval and CompuServe make good reading. The last two also publish monthly magazines full of search tips, information about new sources, user experiences, and more. Dialog distributes the monthly newsletter Chronolog.

NewsNet customers periodically receive a printed listing of available newsletters by subject area, and a presentation of their information providers. The NewsNet Action Letter (monthly) is also distributed by mail.

On some services, you can retrieve the help texts in electronic form. Doing that is not a bad idea. It is often quicker to search a help file on your disk, than to browse through a book.

Monitor the offerings

Professional information searchers monitor the activity in the online world. They search databases for information about new sources of information, and regularly read about new services.

On most online services, you can search databases of available offerings, and a section with advertisements about their own 'superiorities'. Keep an eye on what is being posted there.

NewsNet lets you read and search the following newsletters: Worldwide Videotex Update, Worldwide Databases (#PB44), Online

Newsletter, The Online Newsletter, and The Online Libraries and Microcomputers.

The last two are also available as a database from Information Intelligence, Inc., (P.O. Box 31098, Phoenix, AZ 85046, U.S.A. Tel.: +1-602-996-2283). You can read the text on NewsNet about one week before it appears in print.

These two newsletters can also be read and searched on Dialog and Data-Star, as part of the Information Access PTS Newsletter Database. Information Access is a full-text database with many specialized newsletters for business and industry.

On CompuServe, you can get to Information Access through the IQuest gateway to NewsNet.

Subscribing to THE ONLINE NEWSLETTER costs US$50.00 per year (10 issues) for companies, and US$35.00 for personal use (1991). For both newsletters, the price is US$75.00.

These newsletters are also available on CD-ROM. The disk contains four databases: the Online Newsletter, Online Hotline, Online Libraries and Microcomputers, Major Online Vendors and *Joblines* with more than eight thousand full-text articles from January 1980 until today.

The CD-ROM version is delivered with a menu-driven searching program. Each word in every article and headline has been indexed and can be located in all databases. The price for subscriptions of the printed version is US$99.95. Price for nonsubscribers: US$199.95.

The September 1991 issue of The Online Newsletter had the following index (partial):

```
   ****************************
   *NEW & FORTHCOMING DATABASES*
   ****************************

   10)  MULTIMEDIA CIA WORLD FACT BOOK (CD-ROM) [REVIEW]
   11)  NORTH AMERICAN INDIANS ON CD-ROM (CD-ROM) [REVIEW]
   12)  WORLD CERAMICS ABSTRACTS (ORBIT)
   13)  GENE-TOX (TOXNET/NLM)
   14)  UK TRADEMARKS (ORBIT) [RENAMED]
   15)  BRS ADDS DATABASES TO ITS OFFERINGS
   16)  CURRENT PATENTS (ORBIT)
   17)  NEW ENGLAND JOURNAL OF MEDICINE ON CD-ROM (CD-ROM)
   18)  ALUMINUM STANDARDS DATABASE [AAASD] (STN
   19)  PLASNEWS (STN INTERNATIONAL)
   20)  EPIC ANNOUNCES NEW DATABASES
   21)  DISCLIT: AMERICAN AUTHORS (CD-ROM - OCLC)
   22)  CROSS-CULTURAL: CRIME AND SOCIAL PROBLEMS (CD-ROM)
   23)  INTERNATIONAL PHARMACEUTICAL ABSTRACTS (CD-ROM)
   24)  RINGDOC (CD-ROM - SILVERPLATTER)
   25)  CODUS (ESA-IRS)
   26)  MOODY'S COMPANY DATA (CD-ROM)
   27)  FEDERAL NEWS SERVICE (DIALOG)
   28)  INPADOC DATABASE TO BE MADE AVAILABLE IN JAPAN (DIALOG)
   29)  SOFTWARE CD: DESCRIPTIONS & REVIEWS (CD-ROM)
   30)  MONARCH NOTES ON CD-ROM (CD-ROM)
```

An earlier issue of the newsletter reviewed The Encyclopedia of Information Systems and Services, a three-volume "bible" for online users and producers (9th edition):

EISS covers more than 30,000 organizations, systems, services, more than five thousand databases, publications, software products, etc. Their international listing covers 1,350 information organizations in 70 countries, and has 535 pages.

Topics: online host services, videotex/teletext information services, PC oriented services, data collection and analysis services, abstracting and indexing services, computerized searching services, software producers, magnetic tape/diskette providers, micrographic applications and services, library and information networks, library management systems, information on demand services, transactional services (new category), document delivery services, SDI/current awareness services, consultants, associations, research and research projects, and electronic mail applications.

Contact: Gale Research Company, 645 Griswold, Detroit, MI 48226, U.S.A. Tel.: +1-313-961-2242. Price per set: US$ 420.00.

The European Common Market

Many services bring news and information from the European Common Market. The Common Market's free database service, I'M-GUIDE, is a good place to start.

I'M-GUIDE is available through ECHO in Luxembourg by telnet to echo.lu . At the question "PLEASE ENTER YOUR CODE," enter ECHO and press Return.

You can search I'M-GUIDE for information sources, send email inquiries to ECHO, and more. Searches can be done in English, French, German, Italian, Spanish, Dutch, Danish, and Portuguese.

If you have problems using I'M-GUIDE, call the ECHO Help Desk in Luxembourg at +352-34 98 11.

More sources about sources

The "Internet-Accessible Library Catalogs and Databases" report is available by email from LISTSERV@UNMVM.BITNET. Put the following command in the TEXT of your message:

```
GET LIBRARY PACKAGE
```

Cuadra/Elsevier (Box 872, Madison Square Station, New York, NY 10159-2101, U.S.A. Tel.: +1 212 633 3980) sells a Directory of Online Databases, which lists databases available around the world. The catalog can be searched on Orbit and Data-Star.

The Online Access Publishing Group Inc. (Chicago) sells "The Online Access Guide." Annual subscription for this printed manual costs US$18.95 (six issues - 1992).

The LINK-UP magazine is another interesting source. If living in North America, contact Learned Information Inc., 143 Old Mariton Pike, Medford, NJ 08055-8707, U.S.A.. If living elsewhere, contact Learned Information (Europe) Ltd., Woodside, Hinskey Hill, Oxford OX1 5AU, England, if you live outside North America. Tel.: +44 865 730 275. Price: US$25.00 for six issues/year (1993). An online version is available through ZiffNet's Business Database Plus on CompuServe.

Two monthly magazines, Information World Review (price: GBP 30/year) and FULLTEXT SOURCES ONLINE from BiblioData Inc. in the United States, is also available through Learned Information. (BiblioData, P.O. Box 61, Needham Heights, MA 02194, U.S.A.)

FULLTEXT SOURCES ONLINE publishes their listing of full-text databases twice per year. The price is GBP 50 GBP per booklet or GBP 90 per year.

The newsletter SCANNET TODAY (c/o Helsinki University of Techn. Library, Otnaesvaegen 9, SF-02150 ESBO, Finland) presents news of Scandinavian databases by country. Subscription is free.

Computer Readable Databases from Gale Research is available

both in print and online through Dialog. Write to Gale Research Company, 645 Griswold, Detroit, MI 48226, U.S.A.

Many electronic journals and newsletters are available through the Internet, covering fields from literature to molecular biology. For a complete list, send a message to LISTSERV@ACADVM1.UOTTAWA.CA with the following commands in the BODY of your text:

```
GET EJOURNL1 DIRECTRY
GET EJOURNL2 DIRECTRY
```

Practical hints about online searching

We cannot give a simple, universal recipe valid for all online services. What is the best approach on one service, may be useless on others.

Most services offer full online documentation of their search commands. You can read the help text on screen while connected, or retrieve it for later study.

Make a note about the following general tricks:

In conferences and forums:

Many services have commands for selective reading of messages. For example, on CompuServe you can limit your search to given sections. You can also select messages to be read based on text strings in the subject titles. The command

```
rs;s;CIS Access from Japan;62928
```

displays all messages with the text "CIS Access from Japan" in their subject titles starting with message number 62928.

Online searching often starts by selecting databases. The next step is to enter search words (or text strings), and a valid time frame (as in "between 1/1/90 and 1/1/91").

The following sample search terms are used on NewsNet:

VIDEO*	search for all words starting with VIDEO. "*" is a wild-card character referring to any ending of the word. VIDEO* matches words like VIDEOTEXT and VIDEOCONFERENCE.
SONY AND VIDEO	The word SONY and the word VIDEO. Both words must be present in the document to give a match.
SONY WITHIN/10 VIDEO	Both words must be present in the text, but they must not be farther apart than ten words. (Proximity operators)
IBM OR APPLE	Either one word OR the other.

Many services let you reuse your search terms in new search commands. This can save you time and money, if there are too many hits. For example: if IBM OR APPLE gives 1,000 hits, limit the search by adding "FROM JANUARY 1st.," or by adding the search word "NOTEBOOK*".

In file libraries

The commands used to find files are similar to those used in traditional databases. Often, you can limit the search by library, date, file name, or file extension. You can search for text strings in the description of the contents of a file, or use key words.

Example: You're visiting a bulletin board based on the BBS program RBBS-PC. You want a program that can show GIF graphics picture files. Such files are typically described like this:

```
 VUIMG31.EXE     103105  07-15-91 GIF*/TIFF/PCX Picture Viewer/Printer
```

From left to right: file name, size in bytes, date available, and a 40 character description.

You can search the file descriptions for the string "gif". You do this by entering the term "s gif all". This will probably give you a list of files. Some will have the letters GIF in the file name. Others will have them in the description field.

Using ANDs and ORs

Boolean searching may seem confusing at first, unless you already understand the logic. There are three Boolean operators that searchers use to combine search terms: AND, OR, and NOT.

Use the Boolean operator AND to retrieve smaller amounts of information. Use AND when multiple words must be present in your search results (MERCEDES AND VOLVO AND CITROEN AND PRICES).

Use OR to express related concepts or synonyms for your search term (FRUIT OR APPLES OR PEARS OR BANANAS OR PEACHES).

Be careful when using the NOT operator. It gets rid of any record in a database that contains the word that you've "notted" out. For example, searching for "IBM NOT APPLE" drops records containing the sentence, "IBM and Apple are computer giants." The record will be dropped, even if this is the only mention of Apple in an article, and though it is solely about IBM.

Use NOT to drop sets of hits that you have already seen. Use NOT to exclude records with multiple meanings, like "CHIPS Not POTATO" (if you are looking for chips rather than snack foods).

Often, it pays to start with a "quick-and-dirty" search by throwing in words you think will do the trick. Then look at the first five or 10 records, but look only at the headline and the indexing. This will show you what terms are used by indexers to describe your idea and the potential for confusion with other ideas.

Use proximity operators to search multiword terms. If searching for "market share," you want the two words within so many words of another. The order of the words, however, doesn't matter. You can accept both "market share" and "share of the market."

Searching by email

MCI Mail and MCI Fax have a program called Information Advantage, under which online services and newsletters can deliver search results and other information over the online services. Dialog, Dun & Bradstreet, NewsNet, and Individual Inc. have signed up for the program.

You can request a search by direct email to say Dialog. The search results will be returned to you via MCI Mail or MCI Fax.

With Dun and Bradstreet, you call them for a credit report and

they send it to you. With History Associates, you send them a message via MCI Mail, and they report to you.

Using BITNET discussion lists through Internet

To get a directory of Internet/BITNET mailing lists, send the following email message:

```
To:  LISTSERV@VM1.NODAK.EDU
Subject: (keep this blank)
Text:
LIST GLOBAL
```

You will receive a LONG list of available sources of information. A recent copy had over two thousand lines of text. Each mailing list is described with one line. All these mailing lists can be used by email through the Internet. Here is a random selection:

Network-wide ID	Full address	List title
AESRG-L	AESRG-L@UMCVMB	Applied Expert Systems Research Group List
AGRIC-L	AGRIC-L@UGA	Agriculture Discussion
AIDSNEWS	AIDSNEWS@EB0UB011	AIDS/HIV News
ANIME-L	ANIME-L@VTVM1	Japanese animedia and other animation news.
BANYAN	BANYAN-L@AKRONVM	Banyan Networks Discussion List
BRIDGE	BRIDGE@NDSUVM1	Bridge Communication products
CHEM-L	CHEM-L@UOGUELPH	Chemistry discussion
EJCREC	EJCREC@RPIECS	Electronic Journal of Communication
FAMCOMM	FAMCOMM@RPICICGE	Marital/family & relational communication
SOVNET-L	SOVNET-L@INDYCMS	USSR electronic communication list

The column "Network-wide ID" contains the names of the mailing lists. "Full address" contains their BITNET email addresses. "List title" is a short textual description of each conference.

Keep the list on your hard disk. This makes it easier to find sources of information, when you need them.

Subscribing to mailing lists

Each line in the list above refers to a mailing list, also often called 'discussion list'. They work like online conferences or message sections on bulletin boards, but technically they are different. (Read about KIDLINK in Chapter 2 for background information.)

All BITNET mailing lists are controlled by a program called LISTSERV on the host computer given in column two above (for example @UMCVMB). They offer "conferencing" with the following important functions:

* All "discussion items" (i.e., electronic messages sent to the lists' email address) are distributed to all subscribers.
* All messages are automatically stored in notebook archives. You can search these log files, and you can have them sent to you as electronic mail.
* Files can be stored in the lists' associated file libraries for distribution to subscribers on demand.

Where to send a subscription request, depends on where you are communicating from relative to the host running the LISTSERV. If this host is your nearest BITNET LISTSERV, then send the request to the address in column two by replacing the list name by LISTSERV.

Example:
AESRG-L@UMCVMB is administered by LISTSERV@UMCVMB. Subscribe (or signoff) by email to LISTSERV@UMCVMB.BITNET .

If there is a LISTSERV closer to where you live, then you should subscribe to the nearby system rather than to the remote. This helps keep the total costs of the international network down.

Example:
You live in Norway. The nearest LISTSERV is at FINHUTC. To subscribe to AESRG-L@UMCVMB, send to LISTSERV@FINHUTC.BITNET .

Use the addresses in column two when sending messages to the other members of the discussion lists, but do NOT send your subscription requests to this address!! If you do, it will be forwarded to all members of the mailing list. Chances are that nothing will happen, and everybody will see how sloppy you are.

So, you subscribe by sending a command to a LISTSERV. The method is similar to what we did when subscribing to Infonets in Chapter 7. If your name is Jens Jensen, and you want to subscribe to SOVNET-L, send this message through the Internet (assuming that NDSUM1 is your nearest LISTSERV host):

To: LISTSERV@NDSUVM1.BITNET
Subject: (You can write anything here. Will be ignored.)
Text: SUB SOVNET-L Jens Jensen

When your subscription has been registered, you will receive a confirmation. From this date, all messages sent to the list will be forwarded to your mailbox. (Send "SIGNOFF SOVNET-L" to this address, when you have had enough.)

Some lists will forward each message to you upon receipt. Others will send a periodic digest (weekly, monthly, etc.).

To send a message to SOVNET-L, send to the BITNET address in column two above. Send to

SOVNET-L@INDYCMS.BITNET

Review the following example. Most BITNET lists will accept these commands.

Example: Subscription to the China list

CHINA-NN is listed like this in the List of Lists:

CHINA-NN CHINA-NN@ASUACAD China News Digest (Global News)

Scandinavians may subscribe to CHINA-NN by Internet mail to LISTSERV@FINHUTC.BITNET . North American users may send their mail to LISTSERV@NDSUVM1.BITNET .

If your name is Winston Hansen, write the following command in the TEXT of the message

SUB CHINA-NN Winston Hansen

When you want to leave CHINA-NN, send a cancellation message like this:

To: LISTSERV@NDSUVM1.BITNET
Subject: (nothing here)

SIGNOFF CHINA-NN

NOTE: Send the cancellation command to the address you used, when subscribing! If you subscribed through LISTSERV@FINHUTC, sending the SIGNOFF command to LISTSERV@NDSUVM1 will get you nowhere. Send to LISTSERV@FINHUTC.

Never send the SIGNOFF command to the discussion list itself! Always send to the LISTSERV.

Monitoring the action

THINKNET is an online magazine forum dedicated to "thoughtfulness in the cybertime environment." It brings reviews of significant and thought-provoking exchanges within our new electronic nation.

This electronic publication is free. If you're interested in philosophy, subscribe by sending a message through Internet to thinknet@world.std.com . Write the following in the TEXT of the message:

SEND THINKNET TO Your-Full-Name AT UserId@Your-Internet-Email-Address

Example:
If your email address is opresno@extern.uio.no and your name Odd de Presno, use the following command:

SEND THINKNET TO Odd de Presno AT OPRESNO@EXTERN.UIO.NO

THINKNET is also available through the Philosophy conference on The Well, and on GEnie in the Philosophy category under the Religion and Ethics Bulletin Board. (Hard copy versions can be bought through THINKNET, PO BOX 8383, Orange CA 92664-8383, U.S.A.).

If you're on The Well, read the topic "News from Around Well Conferences" to learn about new developments.

These are some mailing lists that may help you locate sources of interest:

NETSCOUT (NETSCOUT@VMTECMEX) The BITnet/Internet scouts. Subscribe by email to LISTSERV@VMTECMEX.BITNET with the following in the TEXT of your message
SUB NETSCOUT yourfirstname yourlastname

This is where you can discuss and exchange information about servers, FTP sites, Filelists, lists, tools, and any related aspects.

HELP-NET (HELP-NET@TEMPLEVM) BITNET/CREN/INTERNET Help Resource. Send email to LISTSERV@TEMPLEVM.BITNET with the text
SUB HELP-NET yourfirstname yourlastname

The list's main purpose is to help solve user problems with utilities and software related to the Internet and BITNET networks. The library contains several good help files for novice networkers. A great place for new Internet users!

Other sources available through the Internet

The Interest Groups List of Lists is available by electronic mail from mail-server@nisc.sri.com . Send a message with the following text in the message body:

```
   Send netinfo/interest-groups
```

Note that as of April 1993, the file was over 1,100,000 bytes in size. It will be returned to you in moderately sized pieces.

You can search the List of Lists by email. Say you're looking for a mailing list related to Robotics. To find out, send a message to LISTSERV@VM1.NODAK.EDU containing the following commands:

```
   //ListSrch JOB   Echo=No
   Database Search DD=Rules
   //Rules DD *
   search robotics in lists
   index
   search robotics in intgroup
   index
   search robotics in new-list
   index
```

Replace the search word 'robotics' with whatever else you may be looking for.

The Usenet list of news groups and mailing lists is available on hosts that run Usenet News or NetNews servers and/or clients in the newsgroups news.announce.newusers and news.lists.

The members of news.newusers.questions, alt.internet.help, alt.internet.access.wanted, and alt.internet.new-users readily accept your help requests.

Alt.internet.services focuses on information about services available on the Internet. It is for people with Internet accounts who want to explore beyond their local computers, to take advantage of the wealth of information and services on the net.

Services for discussion include:

* things you can telnet to (weather, library catalogs, databases, and more),
* things you can FTP (like pictures, sounds, programs, data)
* clients/servers (like MUDs, IRC, Archie)

Every second week, a list of Internet services called the "Special Internet Connections list" is posted to this newsgroup. It includes everything from where to FTP pictures from space, how to find agricultural information, public UNIX, online directories and books, you name it.

Dartmouth maintains a merged list of the LISTSERV lists on BITNET and the Interest Group lists on the Internet. Each mailing list is represented by one line. To obtain this list, send a message to LISTSERV@DARTCMS1.BITNET . Enter the following command in the text of the message:

```
   INDEX SIGLISTS
```

InterNIC Information Service maintains an announcement-only service at LISTSERV@is.internic.net called net-happenings. It distributes announcements about tools, conferences, calls for papers, news items, new mailing lists, electronic newsletters like EDUPAGE, and more. To subscribe, send a message to the LISTSERV containing this command:

```
    subscribe net-happenings Your Name
```

InterNIC's automated mail service is at MAILSERV@RS.INTERNIC.NET. It allows access to documents and files via email. To use it, send email to the Mailserv with the word "HELP" in the subject field of your mail.

How to get more out of your magazine subscriptions

PC Magazine (U.S.A.) is one of those magazines that arrives here by mail. We butcher them, whenever we find something of interest. The "corpses" are dumped in a high pile on the floor.

To retrieve a story in this pile is difficult and time consuming, unless the title is printed on the cover.

Luckily, there are shortcuts. Logon to PC MagNet on CompuServe. Type GO PCMAG to get the following menu:

```
   PC MagNet

    1 Download a PC Magazine Utility
    2 PC Magazine Utilities/Tips Forum
    3 PC Magazine Editorial Forum
    4 PC Magazine Programming Forum
    5 PC Magazine After Hours Forum
    6 PC Magazine Product Reviews Index
    7 Free! - Take a Survey
    8 Submissions to PC Magazine
    9 Letters to the Editor
   10 Subscribe to PC Magazine
```

Choice six lets you search for stories. Once you have a list with page/issue references, turning the pages gets much easier.

PC Magazine is owned by the media giant Ziff-Davis. PC MagNet is a part of ZiffNet on CompuServe. So is Computer Database Plus, which lets you search through more than 250,000 articles from over 200 popular newspapers and magazines. The oldest articles are from early 1987. The database is also available on CD-ROM, but the discs cover only one year at a time.

CDP contains full-text from around 50 magazines, like Personal Computing, Electronic News, MacWeek and Electronic Business. Stories from the other magazines are available in abstracted form only.

To search the database, CDP, you pay an extra US$24.00 per hour. In addition, you pay US$1.00 per abstract and US$1.50 per full-text article (1992). These fees are added to your normal CompuServe access rates.

ZiffNet also offers Magazine Database Plus, a database with stories from over 90 magazines covering science, business, sport, people, personal finance, family, art and handicraft, cooking, education, environment, travel, politics, consumer opinions, and reviews of books and films.

The magazines include: Administrative Management, Aging, Changing Times, The Atlantic, Canadian Business, Datamation, Cosmopolitan, Dun's Business Month, The Economist, The Futurist, High Technology Business, Journal of Small Business Management, Management Today, The Nation, The New Republic, Online, Playboy, Inc., Popular Science, Research & Development, Sales & Marketing Management, Scientific American, Technology Review, UN Chronicle, UNESCO Courier and U.S. News & World Report.

In the next chapter, we will present another ZiffNet magazine database: the Business Database Plus.

Magazine Index (MI), from Information Access Company (U.S.A.), is another source worth looking at. It covers over 500 consumer and general-interest periodicals as diverse as Special Libraries and Sky & Telescope, Motor Trend and Modern Maturity, Reader's Digest and Rolling Stone. Many titles go as far back as 1959.

Although most of the database consists of brief citations, MI also contains the complete text of selected stories from a long list of periodicals. It is available through Dialog, CompuServe, BRS, Data-Star, Dow Jones News/Retrieval, Nexis, and others.

Say you so often get references to a given magazine that you want a paper subscription. Try the Electronic Newsstand, which is available by gopher or telnet to gopher.netsys.com. If these Internet commands are unavailable, try mail to staff@enews.com.

Finding that book

Over 270 libraries around the world are accessible by the Internet telnet command. Some of them can also be accessed by Internet mail. This is the case with BIBSYS, a database operated by the Norwegian universities' libraries.

I am into transcendental meditation. I'm therefore constantly looking for books on narrow topics like "mantra". To search BIBSYS for titles of interest, I sent mail to genserv@pollux.bibsys.no . The search word was entered in the subject title of the message. By return email, I got the following report:

```
Date:         Fri, 21 Jul 93 13:54:18 NOR
From: GENSERV@POLLUX.BIBSYS.NO
Subject:      Searching BIBSYS

Search request   : MANTRA
Database-id      : BIBSYS
Search result    : 5 hits.
```

The following is one of the references. I have forwarded it to my local library for processing:

```
Forfatter : Gonda, J.
Tittel    : Mantra interpretation in the Satapatha-Brahmana
            / by J. Gonda.
Trykt     : Leiden : E.J. Brill, 1988.
Sidetall  : X, 285 s.
I serie   : (Orientalia Rheno-traiectina ; 32)
ISBN      : 90-04-08776-1
1  - UHF  90ka03324 - UHF/INDO Rh III b Gon
```

The Danish library database REX may be accessed through most international packet switching networks. Its Network User Address (NUA) is 23824125080000. When connected, enter RC8000 and press return. Press ESC once. The system will respond with ATT. Enter KB REX, and you're ready to search Dansk Bogfortegnelse since 1980, Dansk Musikfortegnelse since 1980, and ISDS Denmark.

BARTON is the library system of Massachusetts Institute of Technology. Its database contains everything received since 1974 except magazine articles, brochures, and technical reports from sources outside M.I.T. Phone: +1-617-258-6700 (1200 bps). Press ENTER a couple of times to access the system.

On CompuServe, there is a section for book collectors in the Coin/Stamp/Collectibles Forum, and a Weekly Book Chat section in the ScienceFiction & Fantasy Forum. In the Electronic Mall, you can buy books directly from Ballantine Books, Penguin Books, Small Computer Book Club, The McGraw-Hill Book Company, Time-Life Books and Walden Computer Books.

On the Internet, Roswell Computer Books Ltd. (Canada) has an online bookstore with a database of over 7,000 titles (1993). Gopher to nstn.ns.ca, select "Other Gophers in Nova Scotia", and

then "Roswell Electronic Computer Bookstore". Failing access to gopher, send your email requests to roswell@fox.nstn.ns.ca .

The Book Review Digest (GO BOOKREVIEW) is CompuServe's database of bibliographical references and abstracts of reviews (since 1983). You can search by title, author, and keywords found in the text of book reviews. CompuServe also offers book reviews through Magazine Database Plus.

"Books in print" is a North American bibliographic reference database. It is available on BRS and CompuServe.

South African Bibliographic and Information Network has a gopher service at info2.sabinet.co.za.

FidoNet has COMICS (The Comic Book Echo), BITNET the list Rare Book and Special Collections Catalogers (NOTRBCAT@INDYCMS). NewsNet has the COMPUTER BOOK REVIEW newsletter and on The Well you'll find the "Computer Books" conference. OCLC's WorldCat is a reference database covering books and materials in libraries worldwide.

Bookworms may appreciate the BITNET discussion list DOROTHYL (LISTSERV@KENTVM.KENT.EDU), and especially if they like Agatha Christie, Josephine Tey and Dorothy L. Sayers.

On Usenet, you will find alt.books.reviews, k12.library, alt.books.technical, rec.arts.books, and misc. books.technical, and more.

On the Internet, there are a rapidly growing number of library online public-access catalogs (OPACs) from all over the world. Some provide users with access to additional resources, such as periodical indexes of specialized databases. More than 270 library catalogs are now online (1992).

An up-to-date directory of libraries that are interactively accessible through Internet can be had by anonymous ftp from ftp.unt.edu (then: cd library). File name: LIBRARIES.TXT. Check out the end of Chapter 12 for how to get the file by email (ftpmail).

You will also find full electronic versions of books. This book is one example. Many texts are courtesy of Project Gutenberg, an organization whose goal is to develop a library of 10,000 public domain electronic texts by the year 2000.

Since books are often quite large, they are somewhat bulky for email transfer. If you have direct Internet access, use anonymous ftp instead.

Many books are available through the /pub/almanac/etext directory at oes.orst.edu. For more about how to use the Almanac information server, send Almanac@oes.orst.edu the following email command:

```
send guide
```

For a list of books, add the line

```
send gutenberg catalog
```

Among the offerings, you'll find The Complete Sherlock Holmes Mysteries, The Unabridged Works of Shakespeare, Aesop's Fables, Alice's Adventures in Wonderland, The Holy Bible, The Love Teachings of Kama Sutra, The Holy Koran, The Oedipus Trilogy (Sophocles), Peter Pan, Roget's Thesaurus (1911), and The World Fact Book (1990 - CIA).

If quite impossible to locate a given book, try the Rare Books and Special Collections Forum at EXLIBRIS@RUTVM1.BITNET.

Non-Chinese speaking people will probably classify Chinese poems as 'rare'. Many of them are impossible to read, unless your computer can handle the special characters, and you know their meaning.

Still interested? If yes, subscribe to CHPOEM-L@UBVM.BITNET . Be prepared to use your Big5 and GuoBiao utilities.

Chapter 11: Getting an edge over your competitor

==========

We must be willing to risk change to keep apace with rapid change.

The key is moderation and balance, supported by sufficient information to allow meaningful feedback.

It requires adaption by management and staff in developing the necessary skills and vision.

This chapter starts with how to use the networks to manage projects. Next, it treats how to monitor competitors, prospects, suppliers, markets, technologies, and trends. It winds down with marketing and sales by modem.

Project coordination

So far we have mainly been looking at sources of information. Let us start this chapter with some words about 'online conference rooms' for project coordination.

Several services offer rental of private conference areas to businesses. Corporations have discovered them to be an efficient way of coordinating a group of people, who are far apart from each other geographically. They are also useful when team members are constantly on the move and hard to gather face to face.

Many international companies use such services regularly. The applications are different. They range from tight coordination with suppliers and subcontractors, to development of company strategies and new organizational structures.

Renting an online conference room has advantages over doing it in-house. The company does not have to buy software, hardware, expensive equipment for communications, and hire people for to run and maintain a conferencing system. The more international the business, the better.

For ideas about how to set up and operate a coordination conference. Study how volunteer organizations do it. One place to check out is KIDPLAN, one of several coordination conferences used by KIDLINK (see Chapter 2 and 5).

KIDPLAN is usually most active during April and May each year. This is when their annual projects are being closed down, and new projects are started. Read the dialog between coordinators to get an idea of how the medium is being used.

Old conference messages are stored in notebook files. You can therefore have the full coordination dialogs sent you by email. Send all requests for notebook files to

LISTSERV@VM1.NODAK.EDU

Getting notebook files is a two-step process. In your first message to the LISTSERV, ask for a list of available files. Do this by

using the following command in your email:

    INDEX KIDPLAN

The LISTSERV will return a list of files. The following part is of particular interest:

```
101/2/  KIDPLAN  LOG9105B   ALL OWN V      80  2397 91/05/14
    23:40:22 Started on Wed, 8 May 91 00:11:09 CDT
102/2/  KIDPLAN  LOG9105C   ALL OWN V      80  3141 91/05/21
    20:44:16 Started on Wed, 15 May 91 01:24:51 CDT
104/2/  KIDPLAN  LOG9105D   ALL OWN V      80  2685 91/05/28
    22:34:31 Started on Wed, 22 May 91 17:01:21 +0200
```

Don't bother about the details. You just want file names, and dates. The file LOG9105B contains all messages from 8 May 1991 until 15 May.

If you want all these three files, send another message to LISTSERV with the following lines:

```
GET KIDPLAN LOG9105B
GET KIDPLAN LOG9105C
GET KIDPLAN LOG9105D
```

The files will be forwarded to your mailbox.

Note: Some mailbox services have restrictions on the size of incoming mail. This may prevent you from receiving large notebook files. If this happens, contact your local postmaster for help.

Some email systems are unable to forward your return-address correctly to LISTSERV. If you suspect that this is the reason for lack of success, try the following commands:

```
GIVE KIDPLAN LOG9105B TO Your-Correct-Return-Address
GIVE KIDPLAN LOG9105C TO Your-Correct-Return-Address
GIVE KIDPLAN LOG9105D TO Your-Correct-Return-Address
```

Making it work

Making online conferences and task force meetings work, can be a challenge. Most of the dialog is based on the written word. The flow of information can be substantial thus causing an information overload for some participants.

To overcome this, many companies appoint moderator-organizers for their online conferences. This person:

> Adds value by setting agendas; summarizing points; getting the discussion(s) back on track; moving on to the next point; mediating debate; maintaining address and member lists; acting as general sparkplug/motivator to keep things flowing by making sure that contributions are acknowledged, relevant points are noted, new members are welcomed, silent "Read-Only Members" are encouraged to participate, and the general atmosphere is kept appropriate to the goals of the conference/task force meeting.

Great online conferences don't just happen. Hard work is required. A few people must be responsible for getting the meetings fired up and keep the discussion rolling.

The meeting's organization may depend on the number of participants, where they come from, the exclusivity of the forum, and the purpose of the "meeting."

In large meetings, with free access for outsiders, the best strategy may be to appoint a Moderator-Editor. This person

> Filters contributions, gathers new information, summarizes scattered contributions, does background research.

Filtering may be needed in conferences that are open to customers and media. The main purpose, however, is to help participants cope with the absolute flow of information.

A conference can have an educational purpose. If so, you may bring in someone who can add value by bringing experience and expertise to the group.

You will also need someone to do all the dirty jobs everyone expects to be done - but never notices until they are not done. This person must keep the show running by serving as a benevolent tyrant, sheriff, judge, mediator, general scapegoat, and by playing a role in setting the general policy and atmosphere of the meeting.

Now, back to the 'normal' applications of the online resource.

Monitoring what others do

The best business opportunities are outside your company, in the external world. We need to monitor customers and markets, find technologies to help develop and build products, research new business actions, find new subcontractors and suppliers, people to hire, and persons to influence to boost sales.

In this marketing age, where sales calls cost hundreds of dollars and business-to-business marketers use the telephone or the mails to reach prospects, complete and accurate market lists are most valuable commodities.

There are many other questions: What are our most important customers and their key people doing? What new products are they promoting? Who are their joint-venture partners? What else may influence their willingness to buy from us?

What prices are our major suppliers offering other buyers? Should we get other sources for supplies? What major contracts have they received recently? Will these influence their ability to serve our needs?

What new technologies are available now and how are they being used by others?

Threats are the reverse side of opportunities. What are our competitors doing? What products and services have they launched recently? Are they successful? What are our competitors' weaknesses and strengths? What relationships do they maintain with our most important customers? How is their customer support functioning, and what methods are they using in their quality assurance?

Each company has its own priorities when it comes to watching the external environment. The information needs are different from company to company, depending on what products and services that are offered, the technological level of the company, the markets that they address, and more.

Needs and priorities also differ by department and person, for example depending on whether a user is the president, a marketing manager, product manager, sales man, or has a position in finance or production.

Remember your priorities when going online to search. You cannot possibly capture and digest all information that is there. Your basic problem remains to find the right information in the right form at the right time.

Build your own, local 'database'

It does not take much effort to check one hundred different topics from multiple online sources on a daily basis. The computer will do it for you.

Also, you do not have to read all stories as carefully as you would with printed material. Most experienced users just read what is important now, and save selected parts of the retrieved texts on their hard disks for later reference.

We handle printed material differently. Most of us make notes in the margins, underline, use colors, cut out pages and put into folders. These tricks are important, since it is so hard to find information in a pile of papers.

Not so with electronic information. With the right tools, you can locate information on your computer's hard disk in seconds.

In seven seconds, I just searched the equivalent of 2000 pages of printed text for all occurrences of the combined search words 'SONY' and 'CD-ROM'!

My tool was the shareware program LOOKFOR (see Chapter 14). It searched through 4.2 megabyte on my 80486-based notebook computer. If you use an indexing program, the search may be completed even faster.

I guess you can see it coming. My personal databases usually give more direct value during my working day, than what I have on paper, and have available online.

My hard disks contain megabytes of texts retrieved from various online services, but only what I have decided to keep. This private database therefore contains more relevant information per kilobyte than the online databases I'm using. Searching the data often gives enough good hits to keep me from going online for more.

I repeat: You will often get better results when searching your own subset of selected online databases, than by going online to get information. It is usually easier and faster.

On the other hand, your in-house database will never be fully up-to-date. Too many things happen all the time.

Also, the search terms used for your daily intake of news will never cover all future needs. Occasionally, you must go online to get additional information for a project, a report, a plan.

Updating your database means going online often to find new supplementary information.

Regular monitoring gives the highest returns, and is required if you want to have an edge over your competitors.

For beginners, the best strategy will often be to start with the general, and gradually dig deeper into industry specific details. Let us now review some good hunting grounds for information, and how to use them.

Clipping the news

Several online services offer 'clipping services'. They select the news that you want - 24 hours a day - from a continuous stream of stories from newspapers, magazines, news agencies and newsletters.

Several services make news immediately available, when they have been received by satellite. The delay previously used to protect the interests of print media is disappearing quickly. Online services usually deliver news sooner than in print media, radio or TV.

You select stories by giving the online service a set of search

terms. The hits are then sent to your electronic mailbox, for you to retrieve at will.

'Clipping' gives an enormous advantage. Few important details escape your attention, even when you cannot go online daily. The stories will stay in your mailbox until you have read them.

'Clipping' on CompuServe

CompuServe's Executive News Service (ENS) monitor more than 8,000 stories daily. They use sources like Deutsche Press-Agentur, Kyodo News Service, TASS, Xinhua News Agency, the Washington Post, OTC News-Alert, Reuters Financial News Wire, Associated Press, UPI and Reuters World Report, IDG PR Service, Inter Press Service (IPS), Middle East News Network and European Community Report.

One of them, Reuters, has 1,200 journalists in 120 bureaus all over the world. They write company news reports about revenue, profit, dividend, purchases of other companies, changes in management, and other important items for judging a company's results. They write regular opinions about Industry, Governments, Economics, Leading indicators, and Commerce.

Reuters also offers full-text stories from Financial Times and other leading European newspapers. Its Textline is a database with news from some 1,500 publications in over 40 countries. It includes Reuters' own news services, and has translated abstracts of stories from some 17 languages. The database reaches back 10 years and is updated at around one million articles per year. (Textline is also available on Nexis, Data-Star, and Dialog.)

Another one, the IDG PR Service, sends out high-tech related news gathered by the staffs of IDG's magazines. InterPress Service covers Third World countries. Middle East News Network integrates the contents of 28 information sources covering this region of the world.

The Executive News Service lets you define up to three 'clipping folders'. Supply up to seven 'key phrases' that define your interests. These key phrases will be used when searching stories as they are sent. Hits will be 'clipped' and held in a folder for you to review at your convenience.

Each folder can hold 500 stories. When creating a clipping folder, you set an expiration date and specify how many days a clipped story is to be held (maximum 14 days).

To browse the contents of a folder, select it from the menu. Stories can be listed by headlines or leads. Select those you want to read, forward to others as email, or copy to another folder. Delete those that you do not need.

Defining key phrases is simple. The important thing is not to get too much nor too little. General phrases will give you many unwanted stories while too narrow phrases will cause you to miss pertinent stories. Let me illustrate with an example:

> The phrase APPLE COMPUTERS will only clip stories that have the words APPLE and COMPUTERS next to each other. This may be too narrow. Specifying just APPLE or just COMPUTERS would be too broad. Entering APPLE + COMPUTERS is a better phrase since the words can appear anywhere in the story, and not necessarily next to each other.

ENS carries an hourly surcharge of US$15/hour over base connect rates.

Clipping on NewsNet

NewsNet greets users with this opening screen:

```
                    ----------------
                    - N E W S N E T -
                    ----------------
              W O R K I N G   K N O W L E D G E

   ***New--Electromagnetic Field Litigation Reporter (EY86) tracks
   developments in every important legal action involving
   electromagnetic radiation from power lines, cellular phones,
   VTDs, and radar and microwave equipment.

   ***The title of HH15 has been changed to Cancer Researcher
   Weekly. This service was formerly entitled Cancer Weekly.

   ***Important work in the blood field throughout the world is
   covered by Blood Week (HH44), including research, literature,
   and upcoming events.

   ***TB Weekly (HH45) is an internationally-focused newsletter
   that concentrates on tuberculosis-related news and research,
   including business developments.


   New Services on NewsNet:

   TB Weekly (HH45)
   Blood Weekly (HH44)
   Electromagnetic Field Litigation Reporter (EY86)
   Chapter 11 Update (FI82)
   Tobacco Industry Litigation Reporter (HH48)
   Trade and Development Opportunities (GT50)
```

For details on new services, enter READ PB99# or HELP followed by the service code.

NewsNet's clipping service, NewsFlash, will automatically search all new editions of newsletters selected for monitoring. The hits will be sent to your mailbox, and be retained there for up to ten weeks besides the current week.

Your selection of newsletters can be extended to include news stories from United Press International (UPI), Reuters News Reports, Associated Press, Business Wire, PR Newswire, and others.

For some time, I clipped newsletters in the telecommunications group using the keywords 'Victoria' (an American communication project) and 'KDD' (the Japanese telecom giant). When I called NewsFlash to check, it typically reported:

```
                    NEWSFLASH NOTIFICATION
************************************************************
   4 Total Newsflash hits. Use STOP to stop and delete all.
  New Hits =   4    Saved Items =   0

TE01      7/17/89     ==     VICTORIA              ==       Headline #1
  COOKE SELLS CABLE HOLDINGS TO 6-MEMBER GROUP FOR NEARLY $1.6 BILLION
    Jack Cooke's cable systems will be sold to 6-member consortium

TE11      7/17/89     ==     VICTORIA              ==       Headline #2
  BOCs' PROGRESS TOWARD INTELLIGENT NETWORK ARCHITECTURE INTERTWINED
WITH DIFFICULT INTERNETWORKING NEGOTIATIONS, PENDING DECREE COURT
```

```
EC89      7/18/89     ==     KDD                    ==       Headline #3
  KDD OPENS NY/LONDON OFFICES
TOKYO, JAPAN, 1989 JUL 14 (NB) -- Kokusai Denshin Denwa (KDD),

EC89      8/22/89     ==     KDD                    ==       Headline #4
  FOREIGNERS CAN BUY INTO KDD
TOKYO, JAPAN, 1989 AUG 17 -- The Japanese government is planning

Enter Headline numbers or ALL to read, MORE, AGAIN, SAVE, STOP, or HELP
-->
```

NewsNet's databases grow by more than 400 stories per day. Your search profiles may contain an almost unlimited number of subjects. Delivery of hits is concurrent. Twenty-four hours a day, seven days a week.

Sprintmail's clipping service (U.S.A.) scans stories from more than 15 international newswires. FT Profile's E-mail Alert searches daily on that particular day's issue of the Financial Times.

Dow Jones News/Retrieval has NewsScan (//CLIP). It can deliver by fax or email to a mailbox on another online service. On GEnie, use QuikNews Express, a personalized news clipping service that is integrated with the Quik-Comm System email service.

Clarinet, a commercial news service available through Usenet, also has a clipping program.

When clipping is impossible

Many services do not offer clipping. Here, your alternative is various methods of regular selective reading.

Many conferencing systems let you select messages by keywords. BIX has Keyword Indexer. It let you search public conferences after a key word or phrase and report hits. Then it offers you to review (or retrieve) messages of interest.

CompuServe's forums have efficient 'read selective' and 'quick scan' commands. Another trick is to limit your reading to specific message sections.

The high forum message volume is a special problem on this service. Old messages are regularly deleted to make room for new ones. (Often called "scroll rate.") Some popular forums do not keep messages for more than a couple of days before letting them go. You must visit often to get all new information.

Many bulletin boards can be told to store unread messages about given topics in a compressed transportation file. This file can then be retrieved at high speed. Special communication programs (often called offline readers) and commands are available to automate this completely.

Powerful scripts (see Chapter 12) can do automatic selection of news stories based on the occurrence of keywords (e.g., a company name) in headlines. I have developed such a system for selecting news from the Online Today magazine on CompuServe.

Subscription services

It is useful to dig, dig, and dig for occurrences of the same search words, but digging is not enough. Unless you periodically scan "the horizon," you risk missing new trends, viewpoints and other important information.

It can be difficult to find good sources of information that suits your needs. One trick is to watch the reports from your clipping services. Over time, you may discover that some sources

bring more interesting stories than others. Take a closer look at these. Consider browsing their full index of stories regularly.

If your company plans exportation to countries in Asia, check out MARKET: ASIA PACIFIC on NewsNet. The newsletter is published monthly by W-Two Publications, Ltd., 202 The Commons, Suite 401, Ithaca, NY 14850, U.S.A. (phone: +1-607-277-0934). Annual print subscription rate: US$279.

The index itself may be a barometer of what goes on. Here is an example. Note the number of Words/Lines. Do these numbers tell a story?

July 1, 1993

Head #	Headline	Words /Lines
1)	THE PHILIPPINES IS AT A TURG POINT	616/78
2)	CHINA AND KOREA WILL LEAD REGIONAL ECONOMIC BOOM	315/41
3)	ASIAN COMPENSATION IS STILL LOW, BUT RISING QUICKLY	303/38
4)	CONSUMER GOODS WON'T BE ALL THE CHINESE BUY	221/29
5)	WOMEN BEAR THE BRUNT OF CAMBODIA'S TROUBLES	284/34
6)	TAIWAN MAKES A MOVE TOWARD THE CASHLESS SOCIETY	243/29
7)	TIPS ON MANAGING CULTURAL HARMONY IN ASIA	264/37
8)	TAIWANESE BECOME MORE DISCERNING, HARDER TO REACH	217/27
9)	DIRECT MARKETING HEADED FOR GROWTH IN SINGAPORE	205/27
10)	TOURISM IN MALAYSIA WILL GROW	610/76
11)	CHONGQING: FUTURE POWERHOUSE	2708/342

It is a good idea to visit NewsNet to gather intelligence. Review indexes of potentially interesting newsletters. Save them on your hard disk for future references. You never know when they may be of use.

The newsletters within computers and electronics bring forecasts of market trends, evaluation of hardware and software, prices, information about IBM and other leading companies. You will find stories about technological developments of modems, robots, lasers, video players, graphics, and communications software.

The Management section contains experts' evaluation of the economical climate with forecasts, information about foreign producers for importers, tips and experiences on personal efficiency, management of smaller companies, and office automation.

Other sections are Advertising and Marketing, Aerospace and Aviation, Automotive, Biotechnology, Building and Construction, Chemical, Corporate Communications, Defense, Entertainment and Leisure, Education, Environment, Energy, Finance and Accounting, Food and Beverage, General Business, Insurance, Investment, Health and Hospitals, Law, Management, Manufacturing, Medicine, Office, Publishing and Broadcasting, Real Estate, Research and Development, Social Sciences, Telecommunications, Travel and Tourism, Transport and Shipping.

Several newsletters focus on specific geographical areas:

* MARKETING RESEARCH REVIEW (Analyzes and evaluates commercially available marketing research and technology assessment reports. Publisher: High-Tech Publishing Co., U.S.A.)
* GERMAN BUSINESS SCOPE and THE WEEK IN GERMANY
* NEWS FROM FRANCE
* COUNTRY RISK GUIDE: EUROPE
* EASTERN EUROPE FINANCE, and EASTERN EUROPEAN ENERGY REPORT
* EUROPEAN COMMUNITY: BUSINESS FORECAST
* INVESTEXT/EUROPEAN REGION
* PRS FORECASTS: EASTERN EUROPE, and WESTERN EUROPE

* AFRICA NEWS ON-LINE
* PRS-FORECASTS: MID-EAST & NORTH AFRICA
* PRS-FORECASTS: SUB-SAHARAN AFRICA
* THE EXPORTER (Published by Trade Data Reports. Monthly reports on the business of exporting. Functionally divided into operations, markets, training resources, and world trade information.)
* MID-EAST BUSINESS DIGEST
* LATIN AMERICA OPPORTUNITY REPORT
* COUNTRY RISK GUIDE: SUB-SAHARAN AFRICA
* COUNTRY RISK GUIDE: ASIA & THE PACIFIC
* PRS FORECASTS: ASIA & THE PACIFIC
* PRS'S POLITICAL RISK LETTER
* SALES PROSPECTOR (Monthly prospect research reports for sales representatives and other business people interested in commercial, and institutional expansion and relocation activity. Separate services grouped by geographic area in the United States and Canada.)

Many newsletters are focusing on technology intelligence:

Sensor Technology

Provides updates on research being conducted in this rapidly evolving technology. Besides analyzing advances in the field, it offers ideas on how this technology can improve products and services.

Advanced Manufacturing Technology

Reports on desktop manufacturing, computer graphics, flexible automation, computer-integrated manufacturing, and other technological advances that help increase productivity.

High Tech Materials Alert

Reports on significant developments in high-performance materials, including alloys, metallic whiskers, ceramic and graphite fibers, and more. Concentrates on their fabrication, industrial applications, and potential markets.

Futuretech

Provides briefings on focused, strategic technologies that have been judged capable of making an impact on broad industrial fronts. Includes forecasts of marketable products and services resulting from the uncovered technology and its potential impact on industry segments.

Advanced Coating & Surface Technology, Electronic Materials Technology News, Flame Retardancy News, High Tech Ceramics News, Innovator's Digest, Technology Access Report, Inside R&D, Japan Science Scan, New Technology Week, Optical Materials & Engineering News, Performance Materials, Surface Modification Technology News, Genetic Technology News, Battery & Ev Technology, and much more.

Newsletters on CompuServe

Many newsletters are being made available through forums' file libraries on CompuServe. Consequently, they are a little harder to locate. Some examples (1993):

Abacus Online - Quarterly newsletter on executive computing. (In the Lotus Spreadsheet forum, Library 3.)

Anime Stuff - News and reviews of Japanese animation software. (Comics/Animation Forum, Library 5.)

Communique - The quarterly newsletter of the International Association of Business Communicators U.K. Chapter. (PR and Marketing Forum, Library 8.)

Distance Education Newsletter - Analyzes the impact of electronic communication on academic research. (Telecommunications Forum, Library 13.)

Hint: To find newsletters in the IBM PC oriented forums, enter GO IBMFF to search. Select "Keyword" as search criteria, and enter "newsletter". Add further keywords to narrow the search to your areas of interest. CompuServe also has other file find services.

Databases with an international orientation

Information Access provides reference databases to businesses. You can search 10 databases with full-text stories, abstracts, and indexes from international magazines.

PROMPT (Overview of Markets and Technology) is the largest of them. It provides international coverage of companies, markets and technologies in all industries.

The other databases cover areas like Aerospace and Defense, Advertising and Marketing, New Product Announcements, Industry Forecasts and Time Series.

The Information Access' databases are available through online services like Dialog, Data Star, Financial Times Profile (England), Nikkei in Japan and on the Thomson Financial Networks. They are regularly published on CD-ROM.

ZiffNet offers the Business Database Plus through CompuServe. Here, you can search in full-text stories from around 550 North American and international publications for industry and commerce (1993).

The articles are about sales and marketing ideas, product news, industry trends and analysis, and provide company profiles in areas such as agriculture, manufacturing, retailing, telecommunications, and trade. This is a partial list of the database's magazines:

Agra Europe, Agribusiness Worldwide, Air Cargo World, Belgium: Economic and Commercial Information, Beverage World, Beverage World Periscope Edition, British Plastics & Rubber, British Telecom World, Business Perspectives, CCI-Canmaking & Canning International, CD-ROM Librarian, Chain Store Age - General Merchandise Trends, Coal & Synfuels Technology, Communication World, Communications Daily, Communications International, Consultant, Cosmetic World News, Dairy Industries International, Direct Marketing, The Economist, Erdol und Kohle, Erdgas, Petrochemie: Hydrocarbon Technology, EuroBusiness, Euromoney, Europe 2000, European Cosmetic Markets, European Rubber Journal, Financial Market Trends, Financial World, Finnish Trade Review, Food Engineering International, Forest Industries, Gas World, Graphic Arts Monthly, The Printing Industry, High Technology Business, IDC Japan Report, Inc., International Trade Forum, Investment International, Israel Business, Japan Economic

Newswire, Journal of International Business Studies, Journal of Marketing Research, Kyodo, Market Research Europe, Medical World News, MEED Middle East Economic Digest, Middle East Agribusiness, OECD Economic Outlook, The Oil and Gas Journal, Oilweek, Petroleum Economist, Plastics World, Purchasing World, Report on the Austrian Economy, Restaurant-Hotel Design International, Royal Bank of Scotland Review, Seafood International, Soviet Aerospace & Technology, Supermarket Business Magazine, swissBusiness, Training: the Magazine of Human Resources Development, World Economic Outlook, World Oil.

Dialog's ASIA-PACIFIC DATABASE covers business and economics in Asia and the Pacific. It contains over 80,000 references from newspapers, magazines and other sources in North America and international.

The Asia-Pasific Dun's Market Identifiers on Dialog is a directory listing of about 250,000 business establishments in 40 Asian and Pacific Rim countries.

The Middle East News Network publishes daily news, analysis and comments from 19 countries in the Middle East produced by Arabic, Hebrew, Turkish and Persian press. You can read these news through Reuters (e.g., on NewsGrid/CompuServe), Down Jones News/Retrieval, and Information Access.

The Jerusalem Institute for Western Defence provides a monthly newsletter with research of the Arab press. It has unedited quotes from around the Arab world. Write LISTSERV@jerusalem1.datasrv.co.il to subscribe (Command: sub arab-press Firstname Lastname).

The International Reports financial newsletter may be read and searched on NewsNet, Information Access, and Mead Data Central.

NewsNet also has Brazil Service, Mexico Service, Country Risk Guides and Weekly International Market Alert.

Use CompuServe's Consumer Report to spot trends in the consumer markets for appliances, automobiles, electronics/cameras, home. EventLine (IQuest, CompuServe) monitors international conferences, exhibitions, and congresses. The Boomer Report concentrates on the habits of the "the baby-boom generation."

Affaersdata in Sweden offers the Swedish-language service "Export-Nytt," which brings short news stories about export/import from all over the world. Information providers are the Swedish Export Council, the Norwegian Export Council, and the Suomen Ulkomaankauppaliitto in Finland.

Orbit has an English language database of Japanese technology. It contains abstracts of articles, patents and standards from more than 500 Japanese magazines.

Dow Jones News/Retrieval brings full-text stories from the Japan Economic Newswire. The Business Dateline contains news from more than 150 regional business publications in the United States and Canada.

The ABI/Inform business database (UMI/Data Courier) contains abstracts and full-text articles from 800 business magazines and trade journals. The sources include the Asia Pacific Journal of Management, Business Korea, and the World Bank Research Observer.

Market research reports from Frost & Sullivan are available through Data-Star. It produces over 250 market reports each year, in 20 industrial sectors. These reports cover results of face-to-face interviews with manufacturers, buyers and trade association executives, supplemented by a search and summary of secondary sources.

Glasnost in the former Soviet Union produced a long list of new online information sources, including:

The Soviet Press Digest (stories from over 100 newspapers),
The BizEkon Reports (financial news from 150 business and financial magazines),
SovLegisLine (law),
BizEdon Directory (detailed information about over 2,500 companies, who want to do business with foreign companies),
Who's Who in the Soviet Union and
The Soviet Public Association Directory.

Some of these may have changed their names now. Contact Mead Data Central (Nexis/Lexis), Data-Star, FT Profile and Reuters for more information.

DJNR also offers full text from the Paris-based International Herald Tribune, publications like the Guardian and others from the United Kingdom, and from sources in the former Soviet Union (like Soviet Press Digest, BizEkon News, Moscow News, and others.)

E-EUROPE is an electronic communications network for doing business in Eastern Europe countries, including CIS. Its purpose is to help these countries in their transition to market economies. It links business persons in Western Europe-Asia-North America with those in Eastern Europe.

Subscription is free and for anyone. To subscribe to E-EUROPE, send email LISTSERV@PUCC.PRINCETON.EDU (or a LISTSERV closer to you) with the body the message containing this line

SUB E-EUROPE YourFirstName YourLastName

E-EUROPE also offers International Marketing Insights (IMI) for several countries in this region, including Russia, Hungary, Czech, Germany, Estonia, Poland, Bulgaria, and Lithuania.

The IMI reports important developments that have implications for traders and investors. Typically brief and to-the-point, they are prepared by American Embassies and Consulates.

The reports cover a wide range of subjects, such as new laws, policies and procedures, new trade regulations, changing dynamics in the marketplace, recent statements by influential parties and emerging trade opportunities.

For a list of E-EUROPE IMI offerings, send the following commands to LISTSERV@PUCC.PRINCETON.EDU:

GET E-EUROPE IMI

IMI update notices are not posted to E-EUROPE, but you can subscribe to updates to these files.

The English-language newsletter "St. Petersburg Business News" is published in Russia by the Committee for foreign economic affairs of LECC. For information and subscription, send email to aag@cfea.ecc.spb.su .

The Financial Izvestia weekly, the joint publication of London Financial Times and Moscow-based Izvestia, is available by email. The complete feed includes the full text of all articles published in the Russian language newspaper, and financial and statistical tables on the commodities and financial markets. Write Legpromsyrie at root@sollo.soleg.msk.su for information.

Several Russian newspapers, including Commersant Daily, Nega, and press services like Postfactum and Interfax, have digests or complete editions available for Relcom network subscribers, usually for a nominal fee.

Interested in the European Common Market?

Pergamon Financial Data Services, NewsNet, and others, offer Dun & Bradstreet European Marketing Online. It contains company profiles of around two million European companies.

Pergamon's ICC U.K. Company Databases contains data on over 140,000 British companies with up to ten years' financial history, addresses, key people, mother firms/subsidiaries, stock quotes. Its Comptex News Service brings daily business news from the European arena.

The UK Company Library on CompuServe has financial information about more than 1.2 million British companies from sources like Extel Cards, ICC British Co. Directory and Kompass UK.

Data-Star offers Tenders Electronic Daily, a database of European Community contract offers.

Investext offers a series of bulletins authored by Europe Information Service (EIS): European Report (biweekly), Tech Report (Monthly), Transport Europe (monthly), Europe Environment (bimonthly), European Energy (bimonthly), European Social Policy (monthly), and Multinational Service (monthly).

Investext is available through Data-Star, Lexis/Nexis, Dow Jones News/Retrieval, Dialog, NewsNet, and others.

The German Company Library (on CompuServe) offers information about some 48,000 German companies from databases like Credit Reform and Hoppenstedt's Directory of German Companies. Its European Company Library contains information about over two million companies in the area.

Nexis (Mead Data Central International) brings news and background information about companies and the different countries in Europe. Their Worldwide Companies database contains company profiles, balance sheets, income statements, and other financial data on the largest companies in 40 countries.

Nexis also has Hoppenstedt German Trade Associations directory, four more newsletters from the Europe Information Service: Europe Energy, Europe Environment, Transport Europe and European Insight, a weekly brief on European Community-related happenings, and Notisur, a biweekly news and analysis report on South American and Caribbean political affairs.

LEXIS (also Mead) has databases with information about English and French law, and other law material from Australia, New Zealand, Ireland, Scotland and North America.

Their Martindale-Hubbell Law Directory has information on over 700,000 lawyers and law firms worldwide. The directory can be used for referrals, selection of associate counsel, and evaluation of competitive counsel.

Check out KOMPASS EUROPE when planning exports to the EEC. Its database contains details about companies in Sweden, Denmark, Germany, United Kingdom, Holland, Belgium, France, Spain, Italy, Sweden and Norway. (On Dialog)

ILINK has the EEC-I conference (Discussion about the European Common Marked). Profile offers full-text searches (and a clipping service) in stories from Financial Times. The database is being updated daily at 00:01.

Those exporting to the EEC need to master German, French, Italian, and Spanish besides having a common knowledge of English.

Conversation is the easy part. The problem is writing, and especially when the task is to translate technical expressions to the languages used within the Common Market.

For help, check out the Eurodicautom online dictionary through ECHO (and others.) Start by selecting a source language (like English), and up to seven languages for simultaneous translation. The translation is word-for-word, but may be put in the correct context if required.

ECHO also offers the European Commission's CORDIS database (Community Research and Development Information Service) containing information about research results within scientific and technical fields. Keywords: Race, Esprit, Delta, Aim, Fast, Brite, Comett, Climat, Eclair and Tedis.

CONCISE (COsine Network's Central Information Service for Europe) is a pan-European information service to the COSINE scientific and industrial research community. COSINE (Cooperation for Open Systems Interconnection Networking in Europe) is part of the European Common Market's Eureka project.

CONCISE brings information about the COSINE project, networks, conferences, networking products, special interest groups, projects databases, directories, email services and other networked services in Europe. It is intended for researchers in all fields, from astronomers through linguists and market researchers to zoologists.

CONCISE is accessible by email through the Internet, by FTP, and interactively (telnet) over the European academic and research networks, over public data networks and over telephone links. (See ECHO in appendix 1 for more information.)

The mailing list EC@INDYCMS.BITNET is dedicated to discussion of the European Community, and is open to all interested persons. Subscribe by email to a LISTSERV close to where you live, or to LISTSERV@INDYCMS.BITNET.

Scandinavia

Most countries have several local language news services. In Norway, Statens Datasentral lets you search stories from the NTB news agency. Aftenposten, a major newspaper, offers full-text stories from their A-TEKST database, from Dagens Naeringsliv (DNX), and the Kapital magazine.

Before meeting with people from Norsk Hydro, go online to get recent news about these companies. It will only take a couple of minutes. What you find may be important for the success of your meeting.

If you know the names of your most important competitors, use their names as keywords for information about recent contracts, joint venture agreements, products (and their features), and other important information.

KOMPASS ONLINE offers information about over 180,000 companies and 34,000 products in Scandinavia, Finland, Germany, Switzerland, and Great Britain. The information is presented in the local language of the different countries.

KOMPASS is used by easy menus. You can search by

* company name
* product or service (optionally using an industry classification code for companies or products)
* number of employees, type of business, postal number, telephone area code, export area, year of incorporation, bank affiliation.

The database is available through Affaersdata (Sweden). New users pay a one time fee of around US$85. Searching costs around US$3.00 per minute.

The TYR database on the Finnish service VIEXPO (tel.: +358 67 235100) offers information about 2,500 companies in the Vaasa and Oulu regions with addresses, phone numbers, contact persons, main products, revenues, and SIC industry classification codes.

We can go on like this. The list of available services is long in many countries.

How to monitor your competitors

Sales managers need to know what competitors are doing. Lacking this knowledge, it is risky to maneuver in the market.

Start by making a strategy for online market intelligence. Here are some practical hints:

(1) Select online services that offer clipping of stories and information based on your search words or phrases. Examples: NewsFlash on NewsNet, //TRACK on Dow Jones News/Retrieval, The Executive News Service on CompuServe. Use these services for automatic monitoring of stock quotes and business news.

(2) Read what investment analysts and advisors write about your competitors. Most markets are well covered by databases and other sources of information.

(3) Read what competitors write about themselves. Their press releases are available from online databases in several countries.

(4) Compare your competitors with your own company and industry. Items: stock prices, profits, revenue, etc.

(5) Regularly monitor companies and their particular products.

(6) Watch trend reports about your industry. Search for patterns and possible niches.

(7) Save what you find on your hard disk for future references.

Can you get everything through the online medium? Of course not! Don't expect to find production data, production formulas, detailed outlines of a company's pension plan, or the number of personal computers in a company. Such information rarely finds its way to public databases.

Intelligence by fax

Financial Times' Profile has Fax Alert. Predefine your interests using search words. Stories will be cut and sent to your personal fax number whenever they appear. Price depends on the number of characters transmitted.

Other online services offer similar services.

The Bulletin Board as a sales tool

Many companies - large and small - use bulletin board systems as a marketing instrument. Here is an example:

The San Francisco-based Compact Disk Exchange (Tel.: +1-415-824-7603) offers a database of used CD records. Members can call in to buy at very low prices. They can sell old CDs through the board or buy from other members. (1992)

Marketing and sales by modem

The Americans have a gift for this. You meet them in online forums all over the world, in person or through agents, and especially in computer oriented conferences and clubs.

Their main strategy is reference selling. Make key customers

happy, and make sure they tell others.

In Chapter 5, I told you what happened when a member wrote about his upgrade to a 425 megabytes hard disk in CompuServe's Toshiba forum. It made me place my order with his preferred seller.

One common sales strategy is to be constantly present in relevant conferences, and spend a generous amount of time helping others. This takes time. By proving competence and willingness to help, you build a positive personal profile. This profile is the key to business, information about competitors and other benefits.

To drop quickly into a conference to post an "advertisement," is a waste of time. The message may be read by some, but chances are that you will be criticized (in public) for having 'polluted their environment' with a commercial message.

Besides, the volume of information in the best conferences for your marketing effort is probably too high to make traditional advertisements worth the while.

Electronic mail

Here is a list of other useful applications of electronic mail:

* to distribute quickly lists of important prospects to your sales force,
* to avoid lengthy telephone conversations,
* to receive order information faster and more efficiently than by traditional mail or fax,
* to distribute quickly reports and memos to key people all over the world,
* to send new prices and product announcements to customers,
* to exchange spread sheets and analyses between users of personal computers.

If this isn't enough, ask for information from the International Business Network at 70724.311@compuserve.com (or, at 70724,311 on CompuServe).

Chapter 12: Practical tips

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- Quick transfers with a minimum of errors
- Rescuing lost files
- Copyright and other legal matters
- Unwritten laws about personal conduct
- Privacy
- Fax services weigh less than your printer
- File transfers through the Internet

Speed and safety

Read about MNP, CCITT V.42, and V.42bis in appendix 2. These are popular methods for automatic error correction and compression of data. Compression gives faster transfers of data.

To use them, your modem must have these features built-in. They must also be enabled in the modem of the service that you are calling.

Compression is particularly helpful when sending or receiving text, for example news stories and messages in conferences. They ensure faster transfers.

They are not of much help when transferring precompressed texts and programs. They may even make file transfers with protocols like ZMODEM, Kermit, and XMODEM impossible. If this happens, temporarily turn off the MNP and V.24/V42bis settings in your modem (more about this in appendix 2).

Some online services let users retrieve conference messages using a special get or grab function. This function often comes in two versions:

* Grab to display: New messages and conference items are received in an uninterrupted stream without stops between items. Retrieval of text can happen at maximum speed.

* Grab to compressed file: New messages and conference items are selected, automatically compressed and stored in a file. This file is then transferred using ZMODEM or similar protocols.

Some services offer unattended online work with a variation of the "get compressed file" method. Read about 'offline readers' in chapter 16 for more about this.

The more advanced your software is, the more time it will take to learn how to use it. The rewards are lower telephone costs, faster transfers, and less time spent doing technical online work.

Recommended.

Different needs, different solutions

Frank Burns of the American online service MetaNet is spokesperson for the strategy SCAN - FOCUS - ACT.

On your first visits to a new online service, you SCAN. The goal is to get an overview of what is being offered and find out how to use it most efficiently. Notes are made of interesting bulletins, databases, conferences, messages, news services, public domain and shareware programs, games, and more.

Capture all of it to disk. Don't study it until disconnected from the service. Evaluate the material to prepare for your next moves: FOCUS and ACT.

As you learn about offerings, users and applications, your use

of the service changes. What was interesting on your first visits, lose out to new discoveries. Some applications may stay as 'regular online functions', like when you decide to read a given news report on Monday mornings.

Here are some other hints:

* Find out what you do NOT have to know and have enough self-confidence immediately to discard irrelevant material. Walk quickly through the information. Select what you need now, store other interesting items on your hard disk, clip references, and drop the remainder of your capture file.

* Learn when and how to use people, computers, libraries and other resources. Prepare well before going online. Note that the online resource may not necessarily be the quickest way to the goal. If you want the name of Michael Jackson's latest album, you may get a faster answer by calling a local music shop. . . .

* Make an outline of how to search the service before going online. If required, start by going online to collect help menus and lists of search commands (unless you already have the printed user information manual). Study the instructions carefully, plan your visit, and then call back.

Often, it may be useful to do trial searches in online data, which you have previously captured to your hard disk. Do this to check if your use of search words is sensible.

Who knows, you may even have what you are searching for right there. Besides, it is imperative that you use the correct search terms to find what you're looking for.

Write your search strategy on a piece of paper. If you know how to write macros for your communications program, consider writing some for your planned search commands. - Few people can type 240 characters per second. Using macros may save you time, frustration and money.

* It may be wise to do your search in two steps. On your first visit: Get a LIST of selected headlines or references, and then log off the service.

Study your finds, and plan the next step. Then call back to get full-text of the most promising stories.

This strategy is often better than just 'hanging online' while thinking. When you feel the pressure of the taximeter, it is easy to make costly mistakes.

* Novices should always go the easiest way. Don't be shy. Ask SOS Assistance services for help, if available. Invest in special communication programs with built in automatic online searching features. They are designed to make your work easier.

* Limit your search and avoid general and broad search terms. It is often wise to start with a search word that is so 'narrow' that it is unlikely to find articles outside your area of interest. Your goal is not to find many stories. You want the right ones.

When everything fails

Data communications is simple - when you master it. Occasionally, however, you WILL lose data. You may even experience the worst of all: losing unread private email on your hard disk.

A while ago, this happened to a friend. She logged on to her mailbox service using the communications program Procomm.

After capturing all her mail, she tried to send a message. For some reason, the computer just froze. It was impossible to close the capture file. She had to switch the power OFF/ON to continue. All retrieved mail was obviously lost.

The other day, I had a similar experience. After having written a long and difficult letter, something went wrong. The outfile was inexplicably closed. The resulting file size was 0 bytes.

Both problems were solved by the MS-DOS program CHKDSK run with the /F option. If you ever get this problem, and have an MS-DOS computer, try it. It may save your day.

Copyright notices and legal stuff

Most commercial online services protect their offerings with copyright notices. This is especially so for database information and news.

Some vendors make you accept in writing not to store captured data on a local media (like diskettes or hard disks). Others (like Prodigy in the U.S.) force clients to use communication software that makes it impossible to store incoming data to disk.

The reason is simple. Information providers want to protect their income.

In most countries, you can quote from what others have written. You can cut pieces out of a whole and use in your own writing. What you cannot do, however, is copy news raw to resell to others. If an online service discovers you doing that, expect a law suit.

Read copyright notices to learn about the limitations on your usage of data that you receive.

Unwritten laws about personal conduct

Some services let their users be anonymous. This is the case on many chat services. If you want to pose as Donald Duck or Jack the Ripper, just do that.

Many free BBS systems let you register for full access to the service during your first visit. It is possible to use any name. Don't do that. Use your true name, unless asked to do otherwise. It's impolite and unrespectful of the other members to participate in online discussions using a false identity.

Being helpful is an important aspect of the online world. The people you meet 'there' use of their time to help you and others. Often free. The atmosphere is one of gratitude, and a positive attitude toward all members.

If you use rude words in public, expect your mailbox to fill with angry messages from others. Those who respond carefully to personal attacks, will never regret it. Don't say things online that you would not have said in person.

REMEMBER: Words written in a moment of anger or frustration can be stored on at least one hard disk. Your 'sins' may stay there for a long time - to resurface when you least want it to.

Here are some guidelines (often called 'online netiquette'):

* If mail to a person doesn't make it through, avoid posting the message to a conference. Keep private messages private.

* It is considered extremely bad taste to post private mail from someone else on public conferences, unless they give you explicit permission to redistribute it.

* Many users end their messages with some lines about how to get in touch with them (their email address, phone

number, address, etc.). Limit your personal "signature" to maximum four lines.

* Do not send test messages to a public conference, unless they are set up to serve this purpose.

* If someone requests that readers reply by private email, do that. Do not send to the conference, where the request appeared.

* When replying to a message in a public conference, many users 'quote' the original message prefixed by '>' or another special character, as in

```
You wrote:
>I strongly believe it was wrong to attack
>Fidel Castro in this way!
```

When you quote another person, edit out whatever isn't directly applicable to your reply. By including the entire message, you'll only annoy those reading it.

* Note that if you USE ALL CAPITAL LETTERS, people will think you're shouting.

Finally, smile with me about the following story: According to Time magazine (7/19/93, p. 58), three women who corresponded with Mr. X over the network discovered his duplicity and went public on the network. The incident sparked a lively debate over electronic etiquette (and ruined Mr. Casanova's chances for further romance).

Fax services weigh less than your computer's printer

Many online services let you send electronic mail as fax messages. This is an interesting feature when in that far away place without a printer. Send the draft contract or other texts to your hotel's fax machine or to your client's office to get a printout on paper.

Privacy

The level of online privacy differs by network, service, and application. Whatever these services may claim, always expect that someone, somewhere, is able to watch, even record.

All mailbox services have at least one person authorized to access your personal mail box in case of an emergency. Most of the time they not have a right to read it without your permission, but they can.

In some countries, mailbox services may let outsiders (like the police) routinely read your private email to check for 'illegal' contents. In this respect, email is not safer than ordinary mail.

The good news is that most 'inspectors' and 'sysops' are good, honest people. On the other hand, it is useful to know your situation.

It is not safe to send sensitive information (like credit card details) by private electronic mail. True, the probability that an outsider should get hold of and take advantage of such information is small, but it definitely is not 100 percent safe.

Encrypt your email to protect sensitive information.

Always assume that someone is recording all that is being said in

online conferences, chats, and other interactive social gatherings. In chats, anyone using a personal computer as a terminal can log the conversation, or use screen dump just to capture 'interesting parts'.

Many PC users can scroll back the screen. They can wait and decide whether to save the conversation in a file until after the conversation has taken place. With these capabilities widely available, users of chats and talk should always assume that their conversations are being recorded.

Do not say indiscreet things in small, informal discussions. It may be recorded and reposted under embarrassing circumstances.

The program PGP has become the defacto international Internet standard for public key encryption.

For more on privacy, check out ETHICS-L@MARIST.BITNET. The files RFC 1113 through 1115 are about 'Privacy enhancements for Internet electronic mail' (see appendix 1 for how to get them).

Usenet has alt.privacy (Privacy issues in cyberspace), and comp.society.privacy (Effects of technology on privacy).

File transfers through the Internet

The Internet is a term used of a network interconnecting hundreds of thousands of computer centers around the world. These centers use different types of hardware and software, and different methods of file transfer.

What method to use for file transfers depends on the source host and the type of mailbox computer that you are using. The transfer usually takes place in two steps:

1. Transferring files from a remote data center to your local mailbox host.

2. Transfer from your local mailbox host to your personal computer.

Transfer to your local mailbox host

We will explain the most commonly used method for those who only have access to file transfer by email. This method can be used by everybody.

Transferring plain text files is easy. Files with imbedded word processor control codes will often have to be treated as binary files. More about this later.

To transfer a text to another user, just send it as an ordinary electronic message.

Getting text files from a library on a remote computer is a special case. Often, they can be had by sending a retrieval command (like GET) by email to the remote center. After a while, the file will be sent to your mailbox by email. You can read it like you read other mail.

Example: The file BINSTART can be retrieved from the KIDART directory on a computer center in North Dakota, U.S.A. It explains how to retrieve binary art files from the KIDLINK project's file libraries.

To get the file, send a message to the center's mail forwarding 'agent' at LISTSERV@VM1.NODAK.EDU. Use the following command syntax in your text:

GET <directory name> <file name>

To get the BINSTART file, write the following command in the TEXT

of your message:

    GET KIDART BINSTART

Note that the command has to be put in the body of the mail and not in the subject field. The file will arrive in your mailbox after a while.

Also, note that lists of available files are usually available by using an "INDEX <directory name>" command. To get a list of files in the KIDART directory, add the command "INDEX KIDART" in your message above.

Non-LISTSERV libraries may use other retrieval commands. Often, you can get information of what commands to use by sending the word HELP to a mailing service (in the Subject area or in the body of the text).

Transferring binary files

Users with a direct connection to the Internet usually have access to the FTP command (File Transfer Protocol). If they do, they often prefer FTP for transfers of binary files like computer programs, pictures, sound, and compressed text files.

The bad news is that the FTP command is not available to all users of Internet mail. These will have to use "FTP by mail," or other tricks to transfer such files. More about this in a moment.

The FTP command gives access to a special file transfer service. It works in the following way:

1. Logon to your local email host and enter 'FTP remote-center-code'. Example: 'ftp 134.129.111.1'.

   This command will connect you to the center in North Dakota mentioned above. Here, you will be prompted for user name and password. Enter 'anonymous' as user name, and use your real name or email address as password.

   This way of logging on to retrieve files is called "transfers by anonymous ftp." You can use this method on many hosts on the Internet.

2. When connected to the remote center, you can request transfer of the desired file to your mailbox. Before doing that, you may have to navigate to a given file catalog (cd directory), and tell the host that the transfer is to be binary (bin). Finally, initiate the transfer by entering a "GET file name" command.

3. The file will be transferred to your local mailbox computer at high speed. When the transfer is done, you logoff from the remote center to "get back" to your mailbox computer's prompt line.

   Now, you can transfer the file to your personal computer using communications protocols like Kermit, XMODEM, ZMODEM or whatever else is available.

Binary files transferred as text codes

If you do not have access to FTP, you must use ordinary email for your binary transfers.

Usually, email through the Internet can only contain legal character codes (ASCII characters between number 32 - 126). Most systems cannot transfer graphics or program files directly, since these files normally contain binary codes (which are outside this ASCII character range).

The solution is to convert binary files to text codes using a

utility program called UUENCODE. The encoded file can be sent by ordinary email, as in this example:

```
  From TRICKLE@VM1.NoDak.EDU Fri Aug 16 16:32:37 1991
  Date:     Fri, 16 Aug 1991 09:31:34 CDT
  To: opresno@EXTERN.UIO.NO
  Subject:  Part 1/1 SIMTEL20.INF PD:<MSDOS.STARTER>

  The file PD:<MSDOS.STARTER>SIMTEL20.INF  has been uuencoded before
  being sent. After combining the 1 parts with the mail headers
  removed, you must run the file through a decode program.
  ------------ Part 1 of 1 ------------
  begin 600 SIMTEL20.INF
  M6T9I;&4Z(%-)351%3#(P+DE.1B`@("`@("`@("`@("`@("`@("!,87-T(')E
  M=FES960Z($IU;F4@,C@L(#$Y.3%=#0H-"B`@(%M.;W1E.B!$=64@=&\@9&ES
  M:6P-"AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:
  M&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:&AH:
  6&AH:&AH:&AH:&AH:&AH:&AH:&@(Z
  `
  end
  -------- End of part 1 of 1 ---------
```

When you receive a message with uuencoded text, download it to your personal computer's hard disk. Use an editor to cut out the codes and paste them to an empty work file. Using the example above, the first line in your work file should contain:

```
  begin 600 SIMTEL20.INF
```

and the last line should contain

```
  end
```

Now, use a utility program called UUDECODE to convert the file back to its binary form (or whatever).

More information about uuencoding and uudecoding is given in the BINSTART file mentioned above (for MS-DOS computers). It has a detailed explanation, BASIC source code for making the program UUDECODE.COM, and a DEBUG script for those preferring that.

Versions of UUDECODE are also available for other types of computers.

Transfer of pictures

Denis Pchelkin in Protvino (Russia) is 11 years old, has two cats and one dog, and has contributed beautiful computer graphics art to the KIDLINK project (1992).

The file ART019 in the KIDART catalog of the North Dakota center contains one of his creations. It is a UUENCODEd picture in GIF graphics format.

You can retrieve Denis' creation by sending a GET command to LISTSERV@VM1.NODAK.EDU . Put the following command in the TEXT of your message:

```
    GET KIDART ART019
```

The LISTSERVer will return a message filled with strange uu-codes. We assume that you have already retrieved the BINSTART file, and that you have a version of the conversion program. Your next step is uudecoding:

Read the message into an editor or a viewing program. Cut and

paste the codes to a work file. Keep the original as backup. Use the UUDECODE.COM program to convert ART019 into a GIF formatted file.

Now, view the picture with your favorite graphics program. (Or use shareware GIF-viewers like PICEM, VUIMG, and VPIC for MS-DOS computers. These programs are available from CompuServe's IBM forums and other services.)

Sending binary files in uuencoded form has weaknesses. One is the lack of automatic error correction when sending/receiving e-mail. Noise on the line can easily distort the picture.

File size is another problem. UUENCODEing typically increases file sizes by almost one third. Some mailbox systems restrict the length of individual messages that you can receive, and the file may just be too big.

If the uuencoded file gets too big, some services can (or will by default) split it up in parts and then sent separately.

Tons of uuencoded public domain and shareware programs are available for retrieval by ordinary email.

FTP by email

While some services accept commands like GET KIDART ART019 by email, this is not so with the many so-called FTP libraries. Many of them can only be accessed by FTP.

Services exist that will do FTP transfers by email for those not having access to the FTP command. The most popular is at DEC Corporate Research in the U.S.

For more information, write a message to one of the following addresses:

ftpmail@decwrl.dec.com
ftpmail@cs.uow.edu.au

In the TEXT of your message, put the word "HELP".

FTPMAIL lets you uuencode binary files for transfers. It can split large files up into several messages, thus helping you around local restrictions on the size of each incoming mail message.

Chapter 13: Cheaper and better communication

Packet data services and data transportation services like Tymnet Outdial, Infonet, Internet, and PC Pursuit may help keep costs down. About reducing the cost of using mailing lists.

Many users access online services by calling them directly. A lot pay extra for long distance calls to other cities and countries, even when this means inferior transmission quality (like when noise characters degrade the data).

Others investigate other routings for their data. One option is the packet data networks. Most countries have Public Data Networks (PDNs) operated by local telecommunications authorities. These services are often cheaper than direct calls for some applications, but more expensive for others.

Before using a packet data network, you'll need to establish a

"Network User Identification" (NUI) with the PDN carrier. You must also know the Network User Address (NUA) of the hosts that you want to access.

In Scandinavia, the local PDNs are called Datapak. They can be accessed by direct local calls or through leased lines. To personal users, direct calls are least expensive. A leased line may be cost efficient when the daily volume is high, like in a company.

When you communicate with online services through a PDN, the latter will split your data and bundle it in standard envelopes or 'packets'.

Each packet is marked with a code and sent out into the data stream. Based on this code, the packet is routed from computer center to computer center until it reaches its final destination. There, the information will be reassembled into its original form before being handed over to a user or online service.

It is almost like traveling by train. The price per packet or traveler is lower than what it costs to rent the whole train for your trip.

National telecommunications monopolies were the first to offer packet data services. Their rates were moderately lower than for long distance calls, but it was hard to find the relationship between real costs and prices. This is still the situation in many countries.

Throughout the world, efforts to privatize nationwide phone networks continue. In many countries, this has given us some interesting competitors offering attractive rates for similar services.

Their rates differ considerably from country to country, as does the quality of transmissions. The advantage of using packet data also varies considerably, by application and by country. The best routing for retrieval of online news may be impossibly expensive for chats or complex online jobs.

We can offer no hard rules of thumb, except this:

Compare rates regularly!

What is cheapest?

Some networks charge by the hour, while others charge by volume (number of characters transferred per minute).

When volume is low, your best bet is to use network services with a low price per minute and high prices for volume.

When volume is high, you may be better off using those charging by the minute.

To estimate costs reliably, you'll need statistics. Since your usage probably differs from what others do, start accumulating experience data now. Like this:

On services only charging for connect time

Capture trip information to a log file. Register the following information:

* number of minutes connected
* modem speed
* number of characters transmitted.

Some communication programs can do this automatically for you.

On services charging for time and volume

Log the following information:

* number of minutes connected

* modem speed
* number of segments or packets (measurements of volume)

You need this to estimate the average volume of data transferred by minute. Here are some general experiences and hints:

Long streams of data without stops are cheaper through services that only charge by the minute. Retrieving software is a typical high volume application.

Trips that include navigation from conference to conference, with a little bit of up- and downloading here and there, make the average transfer speed fall dramatically. It's like driving through a big city at 150 kilometers per hour. Red lights will reduce the average speed considerably.

The actual transferred volume of text per minute will differ from place to place (geographically), and often also from call to call. It depends on factors like:

* How fast you can enter commands and how much time you spend staring at the display before pressing keys,
* How long it takes for an online service to react to your commands. For example, the response time on CompuServe at 04:00 GMT on a Friday morning (it is evening in the U.S.) is much worse than at 10:30 GMT on a Sunday morning. Then, most users are asleep.
* The load on your packet data network while you use the service (or the amount of noise and retransmission, when calling direct),
* The type of modem you are using (speed, level of MNP),
* The number of commands you (or your scripts) have to enter during your online visit. An increase in the number of commands, reduces the average transfer speed.
* The amount of transfer overhead for color and screen handling (like, VT-100 codes) that is transferred with your text.
* Your use of menus and help texts while online, or whether you come as "expert" with a minimum of prompts.

It's impossible to calculate the practical effects of these items. You will just have to bear them in mind when estimating typical jobs, measuring speeds, calculating costs, and comparing networks.

Finding the optimal network for our needs, will take time, but is well worth the effort. I think the figures may surprise you.

The network services in this chapter will often give you better quality transfers than a direct call. On the other hand, calling direct may give more characters transferred per minute. The average speed tends to drop dramatically when using a packet data service.

Using national packet data services

Most commercial online services can be reached through national PDNs, but you may have problems finding the correct NUA (Network User Address) to get there. Few PDNs have a directory of available "electronic telephone numbers" for you to consult.

The Norwegian PDN, Datapak, used to be my only alternative for access to foreign online services, and I thought that the cost was acceptable. Not so anymore.

My applications require that data be pumped back and forth at maximum speed. On network services charging by a combination of volume and time, 80 percent of my costs are typically for volume, while 20 percent is for connect time.

When I log out after a successful visit to CompuServe through Datapak, the two services give me similar reports:

```
  Thank you for using CompuServe!

  Off at 10:11 EST 24-Nov-87
  Connect time = 0:15

  CLR PAD  (00) 00:00:14:55 537 75
```

The last line comes from Datapak. It tells that I have received 537 segments and sent 75.

The "Segment" is Datapak's volume measure. A segment contains up to sixty-four characters and/or carriage returns. The price is calculated accordingly.

At today's prices, Datapak is still my cheapest alternative calling CompuServe for chats.

I use Datapak when connecting to TWICS in Tokyo, as the only alternative today is direct calls at a prohibitive cost. Once i-Com (see below) starts offering outdial to Japan, I expect this service to be substantially cheaper.

The slower your modem speed, the more attractive is Datapak compared with direct calls.

To get access to a national PDN, you must have a user identification and a password. (Getting temporary access to PDN services while traveling abroad is often hard and expensive.)

| Note: If you have access to a national PDN, but need information about PDNs in other countries, try Hostess, the Global Network Service's information service from British Telecom in England. The NUA is 02342 1920101013 (02342 is the Data Network Identifier Code section of the address.) Username or password is not required to use this service.

Outdial through PC Pursuit

Sprintnet (formerly GTE Telenet) lets American users call bulletin boards in North America at lower rates through their PC Pursuit service.

They pay a modest subscription to call a local number for access to PC Pursuit. Once connected, they can enter an electronic phone-number to connect to a so-called 'outdial modem' in another city.

Once connected to the outdial modem, they can give it dialing commands and have it call any local number. This way, they can use PC Pursuit to call an online service in the area, or the private modem of a friend.

We call PC Pursuit an Outdial service. Such services normally offer lower rates for access to remote bulletin boards than what it costs to call by long distance. Besides, they reduce the chances for noise on the line.

Outdial through i-Com

i-Com offers outdial to North American online services by reselling capacity from Tymnet's network (owned by British Telecommunications PLC).

In the United States, Galaxy Telecomm Corp. offers a similar service under the name Starlink. Outdial to numbers in Japan and Europe is planned.

i-Com markets its services to users in Europe and Japan, and have local access in Brussels, Paris, Lyon, Milano, the Hague, Eindhoven, Zurich, Geneva, London, Belfast, Birmingham, Bristol,

Cambridge, Edinburgh, Leeds, Frankfurt, Cologne, Munich, Madrid, Stockholm, Copenhagen, and more.

The basic fee for access to the service is US$25.00 per hour (1992). You don't pay volume charges. The monthly subscription fee is US$8.00. You can pay using VISA or MasterCard/Eurocard.

In Norway, I have used i-Com to connect to The Well in San Francisco, MetaNet in Virginia, EXEC-PC in Wisconsin, and SciLink in Toronto, Canada. At the time, i-Com was cheaper than direct calls and Datapak for access to these services.

While an ID on your local PDN is only valid in your area or country, your i-Com ID can be used all over the world including several cities in North America. Once your plane has landed in Milano, you can dial the local i-Com node to connect to your favorite service.

i-Com also has a bulletin board (US$13.00/hour). These are some of its services:

* Search a database to find BBS numbers in a given area of interest, or to locate outdial numbers in a given city or area code.
* Conferences about how to use North American bulletin boards.
* Retrieval of shareware and public domain software.
* Online shopping of American goods at American prices.

Cheaper access to CompuServe

Wherever CompuServe has local access points, you'll be better off using these. You do not have to sign any special agreements. Your CompuServe ID is all you need. Payment for using these services will appear on your CompuServe bill.

CompuServe has special deals with a list of network services, like InfoNet Europe (formerly Computer Sciences Corp.), Istel, FALNET, FENICS, CompuPass, LATA Networks, Tymnet/Sprintnet. Enter the command GO LOG on CompuServe to get access information, and GO RATES for rates.

I have been using CompuPass from Japan, CompuServe's own network in the United States, Istel, InfoNet, and PDN services in Europe.

When at home, I usually use CompuServe's 9600 bps node in Stockholm, Sweden. It is even cheaper than calling Oslo for a 2400 bps node for most of my jobs. There is no surcharge when accessing at non-prime time, and US$7.70 per hour during prime time (weekdays 08:00 to 19:00 local time). In addition, I pay long distance rates to call the node. CompuServe has no extra charges for volume.

| Whenever CompuServe opens a new node in your vicinity, or upgrades the modem speed on one of their nodes, look at the effects on your total costs.
|
| Use software for automatic access and navigation (like TAPCIS, OzCIS, or ATO). They give higher volume per minute and make your accesses even more cost efficient.

Before leaving for a business trip, visit CompuServe to find local access numbers in your destination cities. The list of countries includes Australia, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Italy, Japan, Mexico, Holland, South Africa, Spain, Sweden, Switzerland, and England.

You can also access CompuServe through i-Com and other outdial services.

CompuServe has exchange of electronic mail with Internet. You

can also access the service by telnet to hermes.merit.edu (binary transfers are impossible, though).

IXI - a European alternative to PDN

IXI is an X.25 data network for European academic, industrial and governmental research centers. It is sponsored by the EEC under the ESRIN project, and is operated by the Dutch PTT.

IXI interconnects national research networks, many national public data networks and several specialized international networks. It works like a national PDN service, but uses its own Network User Addresses. Echo, STN, DIMDI, Data-Star and other database vendors can be accessed through IXI.

The service is not available to most users having email access through the Internet.

Using DASnet to cross network boundaries

DA Systems forwards electronic mail and files (also binary files) across mailbox system boundaries for customers. They can send your mail to several large in-house systems, information networks, and over 60 commercial mailbox systems in 30 countries.

These are some systems on their list: ABA/net, Alternex (Brazil), ATT Mail, BIX, BITNET, CESAC (Italy), CIGnet, ComNet (Switzerland), CONNECT, Dialcom, Deutsche Mailbox, Dialcom, Envoy 100, EIES, EasyLink, Euromail (Germany), FredsNaetet (Sweden), Galaxy, GeoNet (hosts in Germany, England, U.S.A.), GreenNet, INET, INFOTAP (Luxembourg), Mailbox Benelux, MCI Mail, MercanMail (Asia), MBK Mediabox (Germany), MetaNet, Nicarao (Nicaragua), NWI, OTC PeaceNet/EcoNet, Pegasus (Australia), PINET, Portal, PsychNet, San Francisco/Moscow Teleport, Telexphone (France), TeleRede (Portugal), Telehaus Nordhorn (Germany), Telemail, TEXTEL (the Caribbean), TWICS (Japan), UNISON, UUCP, Web (Canada), The WELL, Internet.

This list may suggest lack of connectivity between networks that do indeed have connections. For example, Internet email may easily be sent to ATT Mail, Alternex, BIX, BITNET, FredsNaetet, GeoNet, GreenNet, and many others on this list. Connectivity changes constantly. Check to see if you really need it, as this service is far from free.

DASnet also lets you send email as telex, fax and by ordinary mail. They charge you by the number of characters transferred, and the destination address. (Contact Anna B. Lange, DA Systems, Inc., U.S.A. Tel.: +1-408-559-7434, or write her at AnnaB@11.DAS.NET).

FidoNet - grassroots playground

FidoNet is an amateur network consisting of tens of thousands of bulletin boards all over the world. The network is "loosely coupled," meaning that most of the participating boards are not always connected. They call each others at regular intervals to exchange mail, often in the middle of the night when the rates are low.

Most FidoNet boards have conferences, and allow you to send mail to users of other systems. NetMail is a term often used for private FidoNet email. EchoMail is used about its international conferences. The selection of echomail conferences on a given FidoNet board can be as unique as the rest of the system.

RelayNet

is another global network of bulletin boards. It offers exchange of email between systems. Messages and conference items entered on one system will automatically be copied to other participating boards. Your costs for "talking" with others in other parts of the world are very small.

Other grassroots networks

It doesn't take much to set up a bulletin board service, and it is as easy to connect BBS systems to each other in a dial-up network for regular exchanges of email, files and conferences.

All over the world, grassroots networks keep popping up with names like ILINK, AmNet, Suedd MB-Verbund, Starmail, MagicNet, A-NET, MausNet, Zerberus-Netz, SMBX-NET, BASA-NETZ, you name it.

Many boards offer access to more than one grassroots network, as well as to the Internet. Thus, the ability to send global email is extended to new users every day.

Other services

The PDN Connect-USA competes with Starlink in North America. (Connect-USA Communications, Inc., 2625 Pennsylvania NE Suite 225, Albuquerque, New Mexico. 505-881-6988 (voice), 505-881-2756 (FAX), 505-881-6964 (BBS).)

Global Access is a similar service reselling time on the Sprintnet network in North America.

Reducing the cost of using mailing lists

The problem of subscribing to mailing lists is that all discussion items come to you in individual messages. Each message comes with its own mailer header, and this information is generally completely useless. (Read "Returned mail" in Chapter 7 for details.)

Newer versions of the BITNET LISTSERV software provide commands that solve this problem:

SET <list name> DIGEST

This command is sent to a LISTSERV to make all daily messages come to you in one, single message. Example: Say you've joined KIDCAFE@vm1.nodak.edu, which usually has a large number of messages each day. Send the following command to the LISTSERV:

```
SET KIDCAFE DIGEST
```

It will typically reduce the number of lines received from this mailing list by around 50 percent.

SET <list name> INDEX

This command is sent to a LISTSERV to get a daily list of messages, like in this example from KIDCAFE:

```
Index Date  Size Poster and subject
----- ----  ---- ------------------
22839 06/22   26 From:    David Chalmers
                           <David.Chalmers@p3.f155.n633.z3.fidonet.org>
                 Subject: Conor Dublin Ireland
```

Based on this list, you can use the LISTSERV's search commands

to retrieve individual messages of interest. These commands are similar to those used for searching in chapter 7.

For more about searching mailing lists' message bases, send a message to LISTSERV@vm1.nodak.edu with the following command in the text of your mail:

GET KIDLINK TIPS

Some LISTSERVs offers simplified search commands and macros to make retrieval of individual messages simpler.

Chapter 14: Keep what you find

==========

Little is gained by being skillful at
locating and accumulating information,
and then becoming drowned
in an avalanche of data
that one cannot manage - or use.

This chapter starts with how to build a personal data base on your own hard disk. We continue by investigating strategies for finding interesting information on your disk, before winding down with some words about what separates good information from bad.

Search and throw away

To novices, everything is difficult. During the first online trips, they may feel as if moving to the other side of the globe to start over: They need new newspapers, magazines, information sources, and services.

Trial and error are required to find online gold mines. As you get more experience, focus tends to shift from getting information to digesting.

Getting the data gets 'into your fingers', and doesn't bother much anymore. The number of retrieved lines increases. The only bad news is that your reading speed remains at the same old level.

In our time, people tend to talk more than they listen, and you usually find more information than knowledge. Therefore, say NO to irrelevant information. It is seldom worth keeping.

There is generally no good reason to learn things that you really don't need to know. Practice "selective ignorance."

Regularly evaluate your online sources critically, and discard those costing you more than they are worth. Concentrate on those giving the best returns.

Adjust the frequency with which you visit selected services to match their usefulness. What used to be daily visits, may have to be downgraded to once per week or month. Consider replacing daily news monitoring by clipping services.

Plan 'overview' and 'details' with different frequencies. 'Overview' refers to online trips to get an impression of what generally goes on. An example:

My script system is set for automatic visits to the CompuServe

Toshiba forum. Whenever I visit, it 'digs out' unread messages based on key words on the item's subject line.

During 1991, it searched for these strings: '5100', T2000', and '425'. Once, This gave the following message to read:

> #: 29550 S6/Hi-Power Notebooks
> 05-Oct-91 17:27:30
> Sb: #T2000SX Recharger
> Fm: Steve Kitahata 75166,1741
> To: All
>
> I tried to order the battery recharger for my T2000SX from Jade Computer last weekend. The sales rep said it would take about a week, so I called today to check up on it. He told me that I could only buy the recharger with the car adapter as a bundled set for $260. They had both advertised in their flyer as separate items, which they should be. Has anyone heard of this?
>
> Does anyone know of any sources that have the battery recharger available? Any help would be appreciated. Thanx.
>
> -- Steve

My script found the search word "T2000" in the subject line's text (Sb: #T2000SX Recharger), and subsequently selected the message.

Once per month, the same system "scans the horizon" to give me an idea of what is going on. This is done by requesting a list of subjects being discussed. Here is part of one such list:

> 29555: DOS 5 Upgrade
> 6 replies
>
> 29540: TDOS Upgrade questions
> 3 replies
>
> 29585: Toshiba DOS 5.0 ships!
> 1 reply
>
> 29586: DOS 5.0 Upgrade Solution
>
> 29580: ToshibaDOS=bad business
> 8 replies
>
> 29581: DOS 5 / Stacker
> 1 reply

Reading the list, allows me to see if new and interesting topics are up for discussion. If I use Stacker and want contact with other users, I can request message number 29581 and the subsequent reply (1 reply). That should give me some email addresses.

| Several advanced communication programs and offline readers have built-in quick scan features. For example, TAPCIS does this just fine in CompuServe forums.
|
| When retrieving conference messages from bulletin boards using 1stReader at high speed, like 9600 bps or above, then the cost of downloading all new items may be insignificant. Therefore, you might just as well do it.

| Later, when reading the captured mail, 1stReader lets you |
| select messages to read from a list of subjects. You can save |
| what you want to keep, and delete the rest. |

By regular scanning subject headers you reduce the risk of missing important trends, for example because authors were using other terms on the subject line than expected.

Scanning also lets us discover if the discussion is heading off in other, interesting directions.

After a while, you'll have a set of sources, persons, and tools that will provide you with what you need. This is your personal infrastructure of electronic information. Now, you must maintain and cultivate it.

Store incoming information

Chances are that you will retrieve more information than you can read. Sometimes it takes weeks for me to get up to date with my own readings.

If you visit several online services, consider storing the data in files with different names. Use part of the file name to show the source of this information.

If visiting a service regularly, consider using the date as part of the file names. This will make it easier to select, read and search them in a useful sequence.

| Example: Say you're regularly visiting TWICS in Tokyo. What you |
| download on November 10, you may store in a file named |
| |
| TW1110.TMP |
| |
| My scripts do this automatically. On some services, they also |
| split retrieved data into URGENT and MAY BE READ LATER files. |
| Private mail from TWICS is stored in NB1110.TMP. By storing |
| private mail separately, it is easier to see if somebody wants |
| a quick reply. |

All file names in this example have the extension .TMP (temporary). This signifies that these files are unread.

When I read them, and select parts for permanent storage on my hard disk, I use different names. Often, I use the year, or a month/year code in the file name extension. For example, the file DIALOG.93 contains information from DIALOG collected during 1993.

Postprocessing the data

The data capture is completed, and the retrieved data is stored on the hard disk in more or several files. Your next task is to

* Read the received texts,
* Cut and paste selected parts to archive or work files,
* Prepare responses to your electronic mail. This may include quoting part of the incoming messages in your replies.
* Finally, delete all temporary files.

Many advanced programs have these features built in. If not, you may use your favorite word processor, or something else. There are many alternatives.

LIST is my favorite MS-DOS shareware file viewer program. It can be downloaded from most bulletin boards. Using LIST, it is difficult to destroy your precious retrieved data while reading,

cutting and pasting.

| MORE ABOUT LIST:
| Assume that all input data is stored in the disk catalog C:\IN
| and that you're using the file name convention suggested above.
| Type LIST and press Enter. A list of file names will appear on
| your screen. Press S to sort the list, and then D to have them
| sorted by creation date. The newest files are at the bottom of
| the list.
| Move the cursor (using the Arrow keys) to the input file
| that you want to read and press Enter. Scroll up and down in the
| file by pressing the PgUp/PgDn or the arrow keys.
| Let's assume that you are reading TW1110.TMP right now.
| On your screen is a piece of information that you want to
| keep for future reference. Mark the text with ALT-M commands
| (keep the ALT key pressed down, while pressing M), and then
| ALT-D. LIST will ask you for a file name. You enter TWICS.93,
| and the text is appended to what is already there.
| This method allows you quickly to mark and append parts
| of your input file to various archive files. Press ESC to
| return to the file list when through, then press D. LIST asks
| if you really want to delete the file. Press Y, and TW1110.TMP
| is gone.
| LIST lets you find information stored in your archives
| (string search). What you find can be marked and copied to a
| work file. It can also be set to invoke an editor or a word
| processor for the selected file.

Reuse of data on your hard disk

Over time your personal archives will grow in size. You begin to experience the benefits of having all this information on your hard disk.

Yesterday's news is today's history, and may be used in many interesting ways.

One business executive regularly monitors key technologies, customers, competitors, and suppliers. He does it by tapping sources like KOMPASS, Associated Press, and Reuters. Interesting bits of information are regularly stored on his disk.

Tomorrow, there is an important meeting with a major customer. First, a quick search through the personal customer database to be reminded of important events since the last meeting. An unfamiliar person is also going to be present. Maybe there is some background information, for example about a recent promotion.

Then, a quick check on major competitors. Maybe they are up to something that he needs to know about.

With efficient tools for searching your hard disk, finding information takes only a few seconds. If you are still left with open questions, go online to complement.

On MS-DOS computers, you can search the files with WordPerfect, LIST, the DOS utility FIND, and a long list of other programs. I prefer programs that let me search for more than one word at the time, like in HYDRO AND PETROCHEMICAL AND CONTRACT, or EXXON OR MOBIL.

| MY FAVORITE: My favorite search utility is LOOKFOR. It can
| be downloaded from many bulletin boards. The MS-DOS program
| is small, fast, and is superior for searches in DOS text files.
| Store your finds in work files, or print them out on paper.
| LOOKFOR is not an indexing program. It is ready to search
| anywhere, anytime.

Discipline and organization is required to get the most out of your file archives. You must decide what to do with each piece of information: Should it be printed out and be read in front of the fireplace this evening, or should it be circulated? Should it be stored on your hard disk, or be refined before storage?

Use standard file names that are easy to remember. If you don't, risk having to view files to find out what they contain.

It may take longer to find a piece of information in a casual file on a large disk, than look up a piece of information on paper in your inbox. Therefore, finish handling your capture file while you read it on your screen:

Send the pieces to their final destination. Make immediate transfers to your TO-DO files. Give the original file a name that makes it easier to move later. Have a procedure that prevents duplication of effort.

Desinformation, deception and errors

Always use several sources of information. Some people write to lead you astray. The online world exposed some interesting incidents that came out of the former Soviet Union before the attempted coup in 1991.

Desinformation hurts everybody and comes from all sides. Even professional news agencies, like Associated Press, Reuters and Agence France-Presse, regularly stumble.

Most news is written by journalists reporting what they have seen, read or heard. Their interpretation of the situation may be wrong. Supplement online news with what knowledgeable people say (by email or in conferences), when knowing the facts is important.

Another point: Errors will occasionally be discovered and reported by the news sources, but always after the fact. Always store these reports in your archives, and make it a rule to search to the end when looking for something. Otherwise, you may never discover these corrections.

Chapter 15: You pay little for a lot!

Calculating costs

Those living in Norway may read up to twenty-six pages of news from Associated Press in the United States and Financial Times (England) for US$ 0.64, or less.

The trick is to dial long distance to a 9600 bps node in Sweden when the telephone company and CompuServe's non-prime time rates are in effect.

At 9600 bps, you may transfer text at up to 960 characters per second. One page of text (size A-4) holds around 2200 characters. A typical news story is one to two pages of text.

> Users watching the 'taximeter' can use online services at a very low cost. For many, global communication is almost free.

Reading exactly the same news through another network or service,

may cost you 300 percent more. Through yet another online service, the cost may double again.

A full issue of the NewsBytes newsletter is around 150,000 characters, or 68 pages of text. Retrieving it from a local BBS typically costs me around 29 cents. Retrieving the full text from CompuServe would cost me over 500 percent more.

Using NewsNet for the job, at 2400 bps through Datapak, would increase my current cost by more than US$30.00.

The time of day may be important. Some services have different rates for access during the day, the evening, and the weekend.

Use your calculator often.

When you pay by the minute

When using bulletin boards, phone charges are often the only cost items. Some boards require a subscription fee for full access to the system. Still, it is easy to calculate the costs of your calls. Divide the subscription fee by an estimated number of calls, and add to the cost of using the phone.

The same applies to users of CompuServe. Their total cost is simply the sum of all connect charges, any network charges (to CompuServe and others), part of the basic subscription fee, and local phone rates (for direct dialing to the service, or to reach the network's node).

Where a service uses a monthly subscription rate, add part of this to the time charges. Distribute the rate using an estimated number of online hours per month.

> Example:
> You pay US$30/hour to access a service during prime time. Your modem speed is 240 cps.
>
> Theoretically, if the data flows without pauses at system prompts, you can transfer 392 pages of text in one hour. Even when you deduct some characters due to stops in the transfer, the resulting transferred volume remains respectable.
>
> To transfer one page of text takes around nine seconds (2200 characters divided by the speed, which is 2400 bps, or about 240 characters per second). The cost is nine cents.
>
> A given binary file (a program) is 23552 bytes large. Using the XMODEM protocol, you can transfer it in about four minutes and thirteen seconds. The cost is US$2.10. To find the cost when paying by the minute is simple. Just calculate the cost per minute or second, and multiply by the estimated connect time.
>
> On many services, it will take a minute or two before you can start to receive text or files. Disconnecting also takes a few seconds. Add this to the connect time when calculating costs.

Pauses and delays in the transfer can be caused by you or others, and may have a dramatic impact. It is particularly important to take this into account when comparing alternatives using different networks.

> Example: Transfers to TWICS via Datapak at 9600 bps rarely gave me higher effective speeds than 100 cps. The reason was that the connection between the Japanese telcom network and TWICS went through a 1200 bps gateway.

A high speed connection to your data transporter's network does not guarantee a high speed connection to the remote computer.

I used to go through Datapak at 9600 bps to a computer center in Oslo. There, I was connected through a local area network to the host computer. The effective speed was rarely higher than 4800 bps. Calling direct gave twice the speed.

Try to measure the effective transfer speed before selecting a routing for your data. Transfer the same amount of text through various networks.

If future transfers are likely to take place at a given time of day, test at that time. If your planned application is retrieval of programs, retrieve programs. If you want to read news, then read news from the services that you want to compare.

When a network service charging for volume (like Datapak) will also be part of a comparison, measuring volume is particularly important. Do not assume that you know the answer in advance.

| NOTE: Always calculate the cost based on a fixed volume, like for the transfer of 1000 characters. This is particularly important when you need to use different transfer speeds to access competing services. |

Network load varies considerably throughout the day depending on the number of simultaneous users, and their applications. This also applies to online services. The load is normally lowest, when the bulk of the users are asleep, and during weekends. When the load is low, you get more done per minute.

Planning and self-discipline pays off

The actual cost of using a given set of services depends a lot on your self-discipline, the tools you use, and on how well prepared you are:

* If accessing manually, use "quick" commands rather than menus to move at maximum speed to desired sources of information.

* Do not set your services to be used with colors, sound, or special methods for displaying graphics, unless you have no choice, or are willing to pay the extra cost. They increase the volume of transferred text, and lower effective speed.

* Get the information and disconnect. It is expensive - and usually unnecessary - to read captured text while online. Log off to read. Call back for more to read, disconnect, and then call back again.

* Learn how to write your mail offline, and send the letters "in a batch" to your mailbox. Your messages will often have fewer typing errors, be better thought out, and the cost will be considerably lower.

* Consider automating your communication (see Chapter 16). I use Bergen By Byte this way. A while ago, it gave me the following progress report: "Time on: 17 hrs 43 min, today 0 hrs 0 min, total 827 times." In average, I spend around 1.3 minutes per call. Yesterday, I was connected for 2:48 minutes. The result was 106 kilobytes' worth of conference mail.

Modem speed and cost

2400 bps is a sensible modem speed for some applications, and used to be a good starting point for new onliners. The benefits of using a faster modem may be marginal under the following conditions:

* When navigating the online service considerably reduces the effective speed, and you access the service manually.
* When you pay considerably more for access at higher speed. (CompuServe charges extra for 9600 bps access, but not much.)
* When your networks do not offer higher speeds.
* When the relative price of a faster modem in your country is prohibitive.

On the other hand, a modem doing 9600 bps or more, does give you considerably faster communication. If doing things faster is more important than keeping costs down, then it is a wise investment. This is the case for me. Besides, often it is definitely cheaper.

Your applications have a considerable impact on your costs. If you mainly use your modem for retrieval of programs and large data files from bulletin boards - and don't have to pay extra for volume - then higher modem speeds will immediately give reduced costs.

A slower speed modem may also stop you from getting what you want. For example, there are several shareware programs on my board that users of 2400 bps modems are unable to download within their allotted 30 minutes per day.

When you pay for volume

Some network services, like Datapak in Norway, have high rates for volume, and very low rates for connect time. When using such services, automatic communication becomes less useful. Rather than connecting, getting a piece of information, disconnecting, and then going back for more, you may find it cost efficient to review menus and results while online.

When paying for volume, the online service's menus become luxury items. Using quick commands for navigating is cheaper.

Your comparisons will never be accurate when comparing with services charging for connect time. It is particularly difficult when the measure of volume is 'packets' rather than 'number of characters transferred'.

Datapak and many other PDN services reports your sessions like this:

```
CLR PAD  (00) 00:00:14:55 537 75
```

These numbers say that you have been connected to a service for 14 minutes and 55 seconds, that 537 data 'packets' have been received, and that 75 have been sent. Use these figures to calculate the cost of the call.

| One data 'packet' or segment contains up to 64 characters. |
| Think of it as a measure of the number of lines. Each line can |
| have a maximum of 64 characters. If you send the character A |
| and a carriage return, then this also counts as a segment. |
| |
| Consequently, it is hard to use the Datapak record to estimate |
| the real number of characters transferred. All we know is that |
| 537 + 75 segments were transferred, and that 612 segments may |
| contain up to 39,168 characters. |

When calculating the cost of a direct call, just the number of minutes counts. Use the time reported by the online service, and not your stop watch. CompuServe gives this type of report:

```
       Thank you for using CompuServe!

       Off at 10:11 EST 24-Nov-92
       Connect time = 0:15
```

If the size of your log file was 15 KB after the first test, and 11 KB after the second, then just adjust the latter to compare (Actual Cost/11*15). It is easy to compare services that only charge by the minute.

More practical hints

It is more expensive to call a service daily "to check the news," than to call it once per week to retrieve the same stories.

Navigating by menus is more expensive than going directly to a source, or going there by stacking commands (i.e., combining quick commands into one).

Many services let you read selective items in conferences by entering a search string. On my BBS, the following command

```
r extended 100+ c
```

lets you read all messages containing the search string 'extended' in the text starting with message number 100.

If you forget the "c" parameter, the flow will stop after each message. This will reduce the average effective speed. Always use "nonstop" commands when reading stories, conference items, and other texts.

Now, read the next chapter.

Chapter 16: Automatic communication

Automatic data communication as a development strategy.

- To get a lead on your competitors.
- To avoid duplication of effort.
- To reduce costs.
- To reduce boring and repetitive work.
- To avoid having to remember technical details.

Automatic communication is both for professionals and amateurs. First, because it keeps the costs down. Second, because it lets you do the job faster and safer.

We all have different needs

Automation will never be the same for everybody. Our needs are too different.

Some get excited when a program can dial a bulletin board, retrieve a program, and then disconnect without them having to

touch the keyboard.

Some want an "answering machine" that can respond to and forward email when he or she is away from the office.

Others want a communications system that can tap selected news sources, search databases, and do postprocessing on the retrieved material.

For most professionals, doing things manually takes too much time. Time is better spent reading, digesting, and using, rather than on stupid technical retrieval work. Computers can do that.

To others again, automation is a question of being able to use the online resource at all. If it takes 60 seconds to get a piece of information, it may be possible to get before running for the next meeting.

If it takes 15 minutes, however, there may not be enough time. If you also need to read a help text to find out how to do it, you may not even consider it. The mind is full of other things right now.

> When using a system for automatic communication, you do not have to learn and remember online commands. The system will do it for you.

The minimum solution

Automatic data communication in its simplest form entails the following:

* One keypress to get the communications program to dial a number, and send user name/password when the online service requests this information.

* Macro commands (like in a word processor) for navigating through an online service, searching, and to send complex commands by pressing one key.

Most communication programs have a macro language or a script language. You will probably never regret time spent on learning how to use these features. At a minimum, you should be able to have your system log on to a service automatically.

Autologon spares you the task of remembering your user name and password. Besides, most people are only able to use the keyboard at a low speed. They easily get frustrated by having to correct typing errors.

Auto-logon with Procomm

Procomm is one of the most popular communications program in use today (see appendix 2). A Procomm script file is a text file, which can contain a list of commands for dialing and navigating on an online service.

When writing a Procomm script for auto-logon, your first step is to list the commands that you believe required. Enter them in a text file (as DOS or ASCII text).

In such scripts, you can test for the occurrence of a small piece of information that the online service is supposed to send at a given time (like the question "Password?").

When this information is found, Procomm can be set to send the proper response or command (here, your secret password).

Scripts can be tied to your favorite online services through Procomm's dialing directory. Press a key to start the appropriate script file for access to a service.

The following is a simple PROCOMM script file. It can be used to access my bulletin board in Norway. It assumes that your name is Jens Mikkelsen, and that the secret password is FOXCROOK4. You'll have to change this before testing.

```
;
;Script file for auto-logon to SHS with PROCOMM and PROCOMM PLUS
;
WAITFOR "our FIRST Name? "
PAUSE 1
TRANSMIT "Jens^M"
WAITFOR "our  LAST Name? "
PAUSE 1
TRANSMIT "Mikkelsen^M"
WAITFOR "ots will echo)? "
PAUSE 1
TRANSMIT "foxcrook4^M"
WAITFOR "^JMore (Y),N,NS? "
PAUSE 1
TRANSMIT "n^M"
WAITFOR "^JMore (Y),N,NS? "
PAUSE 1
TRANSMIT "n^M"
WAITFOR "R] to Continue? "
PAUSE 1
TRANSMIT "^M"
```

It is not difficult. You probably understand a lot already. Here is the explanation:

* the ";" character at the beginning of a line identifies it as a comment line. Procomm is to ignore it. We use such lines for notes.

* WAITFOR "our FIRST Name? "
  has Procomm wait for the text string "our FIRST NAME?" from my BBS. It is a part of the question "What is your first name?".

* PAUSE 1
  halts the execution of the script file for one second.

* TRANSMIT "Jens^M"
  sends the name "Jens" followed by a Return (the code ^M in Procomm).

* WAITFOR "our LAST Name? "
  makes Procomm wait for the question "What is your LAST Name?"

The script continues like this. In WAITFOR commands, we use part of the text that is displayed on our screen once the scrolling stops.

Make sure that the search term is unique. It must not appear elsewhere in the text coming from the host computer. If it does, your name and password may be sent too early.

You can call the script HORROR.CMD, and attach it to the entry for my board in your Procomm phone directory. When you call it the next time, Procomm will execute the commands in the file and "turn the keyboard over to you" when done.

Macros in Procomm

Above, we used a script to log on automatically to a service. When Procomm gives us access to the keyboard again, we must continue manually.

What we want to do online varies. Sometimes, we want to read new messages in conferences. In other cases, the purpose is to check new programs in the file library. If we find programs of interest, we may want to download them.

Shorthand macros can help you do this faster and safer. For example, one macro can take you quickly to a conference for new messages. You can make Procomm start this macro whenever you press ALT-0 (keep the ALT key down, then press 0).

You can have the macro key ALT-1 send other commands when in the file archives.

When I started using MS-DOS computers for data communications, PC-TALK became my favorite program. It has many of the same macro capabilities that Procomm has.

With PC-TALK, I did autologon to NewsNet. Macro number one sent commands that gave me the contents of various newsletters. Macro #2 picked up the contents in another group. Macro #3 picked up stories from my mailbox, and macro #4 logged me off the service. My mission was completed by pressing four or five keys.

Automating the full task

It's a long way from automated logon scripts and the use of macros to automating the whole task. The major difference is that with full automation, you do not have to look at the screen while the script is working. You can do other things. Sometimes, you may not even be present when the job is being done.

On a typical morning, I go directly from bed to my office to switch my communications computer on.

While I visit the bathroom, my communications program calls three online services, retrieve and send information.

When the script has disconnected from the first service, which is my bulletin board, it analyzes the received data. I want an alphabetic list of visitors since my last visit, a sorted list of downloaded programs, and names of those calling in at 9600 bps or higher.

Sometimes, the unexpected happen. There may be noise on the line, or a sudden disconnect. Usually, my script can solve this without manual intervention. It is therefore allowed to work unattended most of the time.

When I get to my office after breakfast, it is all done. My communications program is set for reading and responding to today's email. I can sit down, and immediately get to work.

After having written all my replies, I say "send" to my system. For me, it's time for another cup of coffee. I am not needed by the keyboard while my mail is being sent.

This is what an automatic communications system can do. My scripts also help plan and prepare online visits, and ease my work by postprocessing results.

> When your communication is fully automated, you need not read incoming data while it scrolls over your screen, and then again after logging off the service. You do it only once.

How to get it? Here are some alternatives:

Alternative 1: Write your own system

You can write procedures for powerful script-driven programs like ProYam (from Omen Technology) and Crosstalk MK IV.

I started writing scripts for ProYam over seven years ago. The system is constantly expanded to include new services, refined to include more functions, and enhanced to become more robust.

The scripts make my system work like an autopilot. It calls online services, navigates, retrieves and sends data.

Postprocessing includes automatic reformatting of retrieved data, transfers to various internal databases, statistics, usage logs, and calculation of transfer costs.

Such scripts can do quite complex operations online. For example, it can

- Buy and sell stock when today's quotes are over/under given limits,
- Select news stories and other types of information based on information found in menus or titles.

Script writing is not for everybody. It is complicated, and takes a lot of time. Therefore, it is only for the specially interested.

On the other hand, those going for it seldom regret. Tailor-made communication scripts give a wonderful flexibility. The software does not cost much, but again, it takes a lot of time!

| Do not use large and complex script files before you know the online service well. The scripts let you do things quicker and safer, but there is always a possibility for unexpected problems.
|
| Test your scripts for a long time to make them robust by "training" them to handle the unexpected. Leave them to work unattended when you are reasonably certain that they can do the job. - It may take months to get to that point.
|
| Build a timeout feature into your scripts, so that they don't just hang there waiting for you after an encounter with fate.

Alternative 2: Use scripts made by others

Some script authors generously let others use their creations. Earle Robinson of CompuServe's IBM Europe Forum, share his ProYam scripts for automatic usage of CompuServe with others. They are available from the IBM Communication Forum library.

Enter GO XTALK on CompuServe to find advanced script files for Crosstalk Mk.4.

ZCOMM and ProYam scripts for visiting my board automatically can be freely downloaded there. They split access up into these three phases:

Phase 1: Menu driven offline preparation.
Phase 2: Automatic logon, navigation through the system, and automatic disconnection.
Phase 3: Automatic offline postprocessing.

You will find scripts for other programs on many online services.

Alternative 3: Special software

Several online services sell communication programs with built-in functions that provides you with automation. They can have offline functions for reading and responding to mail. The degree of

automation varies.

There are also many programs written by third parties. Most programs assume that you use 'expert' as your default operating mode on the online service.

TapCIS, Autosig (ATO), OzCIS, CISOP, CompuServe Navigator (for Macintosh), AutoPilot (for Amiga), ARCTIC (for Acorn Archimedes), and QuickCIS (for Atari) are popular choices on CompuServe. TapCIS is my personal favorite. (CIM does not offer much automation!)

Aladdin is for GEnie. It automates your use of RoundTables (conferences), file areas, and mail. Dialog users turn to Dialog-Link.

Nexis News Plus (for Nexis, US$50) has pull-down menus and detailed selection of commands. This MS-DOS program helps users set up detailed search commands before logging on to the Mead Data Central. Your search results will be downloaded automatically.

Personal Bibliographics Software, Inc. (Ann Arbor, Mich, U.S.A. Tel.: +1-313-996-1580) sells Pro-Search to Dialog and BRS users (for Macintosh and MS-DOS).

Pro-Search will lead you through menus to find information on both services. It translates your plain English search commands into the cryptic search language used by the services. It logs on automatically, connects to these services, finds your information, and shows you the hits.

Alternative 4: Offline readers

The alternatives above have one important weakness. Noise on the line can prevent the "robot" from doing the job. All it takes is for noise to give a prompt another content than is expected by your program or script (as in "En@er a number:" instead of "Enter a number:").

You can avoid noise problems by using get commands (see Chapter 15), and by making the online service use its minimum prompts ('expert mode') . Still, this does not give full protection.

The best is to let the online service do the navigation. Think of it as logging on to run a batch file on the remote computer. Combine this with automatic transfers of your commands, transmitted in of one stream of data with automatic error correction (in the software and in the modem), and you have a very robust system.

The program logs on to the service. Then the service takes over. It registers your user identity, checks your user profile for personal interests, retrieves and packs all messages, news and files into one compressed file, and sends it to you at high speed.

Your outgoing messages, search commands, commands to join or leave conferences, and more, are transferred to the remote computer in a similar packet (compressed file).

When received by the remote computer, it unpacks the transfer file and distributes messages and commands to various services following your instructions.

Your "physical" contact with the service is when your modem is disconnected. The help menus that you read belong to your program, and not the online service. You read and respond to mail in a reading module (ref. the term "offline reader").

Some offline readers give the caller access to more tools than is available on the online service itself. They may have spelling checkers, multimedia support, let you use your favorite editor or word processor, and offer various storage, search, and printing options.

Using offline readers is probably the easiest, cheapest, and safest way of using online services. These "readers" are popular among bulletin board users, and some commercial services are also

starting to accommodate them.

There are many offline reader programs. The most advanced take over completely upon logon, and manage transfers of commands and compressed information files to and from the host. (Example: Binkley Term on FidoNet)

Global Link is an offline reader for EcoNet. Bergen By Byte offers the BBS/CS Mail Grabber/Reader, a script system used with the communications program Telix and the service's "auto-get" function.

The most popular systems on the PCBoard based Thunderball Cave BBS are Offline Express, Megareader, Session Manager, Rose Reader and EZReader. These are used with scripts written for various communication programs. Some of them have built in communications (and script) modules.

EZReader from Thumper Technologies (P.O. Box 471346, Tulsa, OK 74147-1346, U.S.A.) lets users retrieve mail from several online systems using transfer formats such as QWK, PCBoard capture files, ProDoor ZIPM files, XRS, MCI Mail, and others. Cost: US$49 (1992).

1stReader from Sparkware (Post Office Box 386, Hendersonville, Tennessee 37077, U.S.A.) is my personal favorite for accessing Qmail based online systems.

| Note: Some offline readers contain all the features required for fully automated communications. Some bulletin boards allow up- and downloading to start right after CONNECT.
|
| Off-Line Xpress, an offline mail reader for QWK (Qwikmail) packets, does not contain a communications module. It just does pre- and postprocessing of mail packets.
|
| You can use the Off-Line Xpress as one element in a larger automated system. For example, a system for access to PCBoard bulletin boards may consist of Off-Line Xpress software, PKZIP and PKUNZIP (popular shareware programs to compress/decompress mail packets), the QMODEM communications program, and a script to navigate to/from the QWK packet send and receive area on the BBS.
|
| 1stReader (version 1.11) contains a powerful script based communications module. It lets you compose replies, set search commands, subscriptions to services, add and drop conferences, and enter download commands offline.

Automatic automation

We have explained how to write scripts with Procomm. However, there are simpler and quicker ways. Many communication programs can make scripts automatically using a learning function. It goes like this:

Start the learning function before calling the online service. Then log on, navigate to the desired services, do what you want to automate, and disconnect.

The learning feature analyzes the received data and builds a script file for automatic communication.

If you call again with the new script, it will "drive the same route one more time."

ZCOMM and ProYam have a learning feature. This is how I made a script for accessing Semaforum BBS using ZCOMM:

ZCOMM asked for a phone number. I entered +47-370-11710. It asked for speed, and I entered 2400 bps. Next, I had to choose one of the following:

(1) System uses IBM PC (ANSI) line drawing
(2) 7 bits even parity

(3) 8 bits no parity

My choice was 1.

ZCOMM dialed the number. When the connection was established, I entered my name and password, navigated to the message section, read new messages, browsed new files in the library, and entered G for Goodbye. This was the "tour" that I wanted to automate.

When disconnected, I pressed the F1 key. This prompted the learning process based on a record of the online tour. The log described everything that had happened in detail, including my pauses to think. Now I was prompted by the following question:

'newscr.t' exists. Append/replace/quit?

I selected append. Then:

Do you want this script file as a new entry in your telephone directory (y/n)?

I entered "y," and named it "semaforum." After a few seconds, my new script was ready:

Your new script is in the file 'newscr.t' !!
You can append the file to your current script file (for example PHODIR.T) or have the commands executed by entering:
call semaforum.newscr.t

It was time to test the new wonder. I entered

call semaforum.newscr.t

at the ZCOMM command line, hit the Enter key, and off it went. ZCOMM called the BBS and repeated everything - at far higher speed than I had done it manually. It went on-hook as planned when done.

Limitations

Auto-learn programs can create a script file that let you "drive the same route." For some applications this is enough. For others, it's just part of the way. You have to refine the script manually to get what you want.

Example:
If you call my bulletin board with an auto-learned script made yesterday, chances are that everything works well. If you call twice on the same day, however, you're in for a surprise. The board greets you differently on your second visit. You will not get the menu of available bulletins. It will take you directly to the system's main menu. Your script must take this into account.

On most online services, many things can happen at each "junction of your road." At one point in one of my scripts, up to twenty things may happen. Each event needs its own "routing."

Twenty possible events are an extreme, but three to four possibilities at each system prompt is not unusual. All of them need to be handled by your script, if you want it to visit online services unattended while asleep.

It is quicker and simpler to use other people's scripts and programs, although this might force you to use a different program for each service.

Personally, I prefer offline readers on services where such are able to do the job. On other services, I usually depend on my own tailor-made scripts.

Chapter 17: Gazing into the future

Thoughts about things to come.

Newspaper of the future

Some years ago, Nicholas Negroponte of Massachusetts Institute of Technology, said that today's newspapers are old-fashioned and soon to be replaced by electronic "ultra personal" newspapers.

"If the purpose is to sell news," he said, then it must be completely wrong to sell newspapers. Personally, I think that it is a dreadful way of receiving the news."

MIT's Media Laboratory had developed a new type of electronic newspaper. Daily, it delivered personalized news to each researcher. The newspaper was "written" by a computer that searched through the news services' cables and other news sources according to each person's interest profile.

The system could present the stories on paper or on screen. It could convert them to speech, so that the "reader" could listen to the news in the car or the shower.

In a tailor-made electronic newspaper, personal news makes big headlines. If you are off for San Francisco tomorrow, the weather forecasts for this city is front page news. Email from your son will also get a prominent place.

"What counts in my newspaper is what I consider newsworthy," said Negroponte.

He claimed that the personal newspaper is a way of getting a grip on the information explosion. "We cannot do it the old way anymore. We need other agents that can do prereading for us. In this case, the computer happens to be our agent."

The technology is already here. Anyone can design similar papers using powerful communication programs with extensive script features. I have tried.

My test edition of The Saltrod Daily News did not convert news to sound. It did not look like a newspaper page on my screen. Not because it was impossible. I simply did not feel these 'extras' worth the effort.

My personal interest profile was taken care of by my scripts. If I wanted news, the "news processor" went to work and "printed" a new edition. On Tuesdays, Thursdays, and Saturdays, I got an "extended edition."

This is a section from my first edition:

"Front page," Thursday, November 21.

Under the headline News From Tokyo, the following items:

TOSHIBA TO MARKET INEXPENSIVE PORTABLE WORD PROCESSOR

TOHOKU UNIVERSITY CONSTRUCTING SEMICONDUCTOR RESEARCH LAB
MEITEC, U.S. FIRM TO JOINTLY MARKET COMPUTER PRINTER INFO
TOSHIBA TO SUPPLY OFFICE EQUIPMENT TO OLIVETTI
NISSAN DEVELOPS PAINT INSPECTION ROBOT
MADE-TO-ORDER POCKET COMPUTER FROM CASIO

These articles were captured from Kyoto News Service through Down Jones/News Retrieval.

The column with news from the United States had stories from NEWSBYTES newsletters:

* DAY ONE COMDEX.
* IBM'S PRE ANNOUNCEMENT OF "CLAMSHELL"
* AT&T TO JUMP IN SOONER WITH LAPTOP COMPUTER
* COMMODORE THIRD CONSECUTIVE QUARTERLY LOSS
* 2 ZENITH UNVEILS TOUCH-SCREEN
* HP's EARNINGS DROP

Hot News From England came from several sources, including Financial Times, and Reuters (in CompuServe's UK News). Headlines read:

* THE CHRISTMAS SELLING WAR
* BIG MACS GOING CHEAP TO UNIVERSITY STUDENTS

"Page 2" was dedicated to technology intelligence. "Page 3" had stories about telecommunications, mainly collected from NewsNet's newsletters. "Page 4" had stories about personal computer applications.

As the cost of communicating and using online services continues to decrease, many people will be able to do the same. This is where we are heading.

Some people say it is too difficult to read news on a computer screen. Maybe so, but pay attention to what is happening in notebook computers. This paragraph was written on a small PC by the fireplace in my living room. The computer is hardly any larger or heavier than a book.

(Sources for monitoring notebook trends: NEWSBYTES' IBM and Apple reports, CompuServe's Online Today, and IBM Hardware Forum.)

Electronic news by radio

If costs were of no concern, then your applications of the online world would probably change considerably. Pay attention, as we are moving fast in that direction.

Radio is one of the supporting technologies. It is used to deliver Usenet newsgroup to bulletin boards (example: PageSat Inc. of Palo Alto, U.S.A.) Also, consider this:

Businesses need a constant flow of news to remain competitive. Desktop Data Inc. (tel. +1-617-890-0042) markets a real-time news service called NewsEDGE in the United States and Europe. They call it "live news processing." Annual subscriptions start at US$20,000 for ten users (1993).

NewsEDGE continuously collects news from more than 100 news wires, including sources like PR Newswire, Knight Ridder/Tribune Business News, Dow Jones News Service, Dow Jones Professional Investor Report and Reuters Financial News.

The stories are "packaged" and immediately feed to customers' personal computers and workstations by FM, satellite, or X.25

broadcast:

* All news stories are integrated in a live news stream all day long,

* The NewsEdge software manages the simultaneous receipt of news from multiple services, and alerts users to stories that match their individual interest profiles. It also maintains a full-text database of the most recent 250,000 stories on the user's server for quick searching.

Packet radio

A global amateur radio network allows users to modem around the world, and even in outer space. Its users never get a telephone bill.

There are over 700 packet radio based bulletin boards (PBBS). They are interconnected by short wave radio, VHF, UHF, and satellite links. Technology aside, they look and feel just like standard bulletin boards.

Once you have the equipment, can afford the electricity to power it up, and the time it takes to get a radio amateur license, communication itself is free.

Packet radio equipment sells in the United States for less than US$ 750. This will give you a radio (VHR tranceiver), antenna, cable for connecting the antenna to the radio, and a controller (TNC - Terminal Node Controller).

Most PBBS systems are connected to a network of packet radio based boards. Many amateurs use 1200 bps, but speeds of up to 56,000 bps are being used on higher frequencies (the 420-450 MHz band in the United States).

Hams are working on real-time digitized voice communications, still-frame (and even moving) graphics, and live multiplayer games. In some countries, there are also gateways available to terrestrial public and commercial networks, such as CompuServe, and Usenet.

Packet radio is demonstrated as a feasible technology for wireless extension of the Internet.

Radio and satellites are being used to help countries in the Third World. Volunteers in Technical Assistance (VITA), a private, nonprofit organization, is one of those concerned with technology transfers in humanitarian assistance to these countries.

VITA's portable packet radio system was used for global email after a volcanic eruption in the Philippines in 1991. Today, the emphasis is on Africa.

VITA's "space mailbox" passes over each single point of the earth twice every 25 hours at an altitude of 800 kilometers. When the satellite is over a ground station, the station sends files and messages for storage in the satellite's computer memory and receives incoming mail. The cost of ground station operation is based on solar energy batteries, and therefore relatively cheap.

To learn more about VITA's projects, subscribe to their mailing list by email to LISTSERV@AUVM.BITNET. Use the command SUB DEVEL-L <First-name Last-name>.

For more general information about packet radio, check out HamNet on CompuServe, and especially its library 9. Retrieve the file 'packet_radio' (Packet radio in earth and space environments for relief and development) from GNET's archive (see chapter 7).

ILINK has an HAMRADIO conference. There is a packet radio mailing list at PACKET-RADIO@WSMR-SIMTEL20.ARMY.MIL (write PACKET-RADIO-REQUEST@@WSMR-SIMTEL20.ARMY.MIL to subscribe).

Usenet has rec.radio.amateur.packet (Discussion about packet

radio setups), and various other rec.radio conferences. There is HAM_TECH on FidoNet, and Ham Radio under Science on EXEC-PC.

The American Radio Relay League (AARL) operates an Internet information service called the ARRL Information Server. To learn how to use it, send email to info@arrl.org with the word HELP in the body of the text.

Cable TV

Expect Cable TV networks to grow in importance as electronic highways, to offer gateways into the Internet and others, and to get interconnected not unlike the Internet itself.

Example: Continental Cablevision Inc. (U.S.A.) lets customers plug PCs and a special modem directly into its cable lines to link up with the Internet. The cable link bypasses local phone hookups and provide the capability to download whole books and other information at speeds up to 10 million bits per second.

Electronic mail on the move

For some time, we have been witnessing a battle between giants. On one side, the national telephone companies have been pushing X.400 backed by CCITT, and software companies like Lotus, Novell, and Microsoft.

On the other side, CompuServe, Dialcom, MCI Mail, GEISCO, Sprint, and others have been fighting their wars.

Nobody really thought much about the Internet, until suddenly, it was there for everybody. The incident has changed the global email scene fundamentally.

One thing seems reasonably certain: that the Internet will grow. In late 1992, the president of the Internet Society (Reston, Va., U.S.A.) made the following prediction:

> ".. by the year 2000 the Internet will consist of some 100 million hosts, 3 million networks, and 1 billion users (close to the current population of the People's Republic of China). Much of this growth will certainly come from commercial traffic."

We, the users, are the winners. Most online services now understand that global exchange of email is a requirement, and that they must connect to the Internet.

Meanwhile, wild things are taking place in the grassroots arena:

* Thousands of new bulletin boards are being connected to grassroots networks like FidoNet (which in turn is connected to the Internet for exchange of mail).

* Thousands of bulletin boards are being hooked directly into the Internet (and Usenet) offering such access to users at stunning rates.

* The BBSes are bringing email up to a new level by letting us use offline readers, and other types of powerful mail handling software.

Email will never be the same.

Cheaper and better communications

During Christmas 1987, a guru said that once the 9600 bps V.32 modems fell below the US$1,200 level, they would create a new standard. Today, such modems can be bought at prices lower than US$200. In many countries, 14,400 bits/s modems are already the preferred choice.

Wild dreams get real

In the future, we will be able to do several things simultaneously on the same telephone line. This is what the promised land of ISDN (Integrated Service Digital Networks) is supposed to give us.

Some users already have this capability. They write and talk on the same line using pictures, music, video, fax, voice and data.

ISDN is supposed to let us use services that are not generally available today. Here are some key words:

* Chats, with the option of having pictures of the people we are talking to up on our local screen (for example in a window, each time he or she is saying something). Eventually, we may get the pictures in 3-D.

* Database searches in text and pictures, with displays of both.

* Electronic transfers of video/movies over a telephone line (fractal image compression technology may give us another online revolution). Imagine dances filmed by ethnologists at the Smithsonian Institution in Washington, D.C., or an educational film about the laps in northern Norway from an information provider called the Norwegian Broadcasting Corp.

  The "Internet Talk Radio" is already delivering programs by anonymous ftp (e.g., through ftp.nau.edu in the directory /talk-radio).

* Online amusement parks with group plays, creative offerings (drawing, painting, building of 3-D electronic sculptures), shopping (with "live" people presenting merchandise and good pictures of the offerings, test drives, etc.), casino (with real prizes), theater with live performance, online "dressing rooms" (submit a 2-D picture of yourself, and play with your looks), online car driving schools (drive a car through Tokyo or New York, or go on safari).

  The Sierra Network has been playing around with these ideas for quite some time.

* Your favorite books, old as new, available for on-screen reading or searching in full text. Remember, many libraries have no room to store all the new books that they receive. Also, wear and tear tend to destroy books after some time.

  Many books are already available online, including this one.

* Instant access to hundreds of thousands of 'data cottages'. These are computers in private homes of people around the world set up for remote access. With the technical advances in the art of transferring pictures, some of these may grow to become tiny online "television stations."

These wild ideas are already here, but it will take time before they are generally available. New networks need to be in place. New and more powerful communications equipment has to be provided.

Farther down the road, we can see the contours of speech-based electronic conferences with automatic translation to and from the participants' languages. Entries will be stored as text in a form that allows for advanced online searching. We may have a choice between the following:

* To use voice when entering messages, rather than entering them through the keyboard. The ability to mix speech, text, sound and pictures (single frames or live pictures).

* Messages are delivered to you by voice, as text or as a combination of these (like in a lecture with visual aids).

* Text and voice can be converted to a basic text, which then may be converted to other languages, and forwarded to its destination as text or voice.

One world

Within the Internet, the idea of "the network as one, large computer" has already given birth to many special services, like gopher and WAIS. Potentially, we will be able to find and retrieve information from anywhere on the global grid of connected systems.

Bulletin boards have commenced to offer grassroots features modeled after telnet and ftp. These alternatives may even end up being better and more productive than the interactive commands offered "inside" the Internet.

The global integration of online services will continue at full speed, and in different ways.

Rates

There is a trend away from charging by the minute or hour. Many services convert to subscription prices, a fixed price by the month, quarter or year.

Other services, among them some major database services, move toward a scheme where users only pay for what they get (no cure, no pay). MCI Mail was one of the first. There, you only pay when you send or read mail. On CompuServe's IQuest, you pay a fixed price for a fixed set of search results.

Cheaper transfers of data

Privatization of the national telephone monopolies has given us more alternatives. This will continue. Possible scenarios:

* Major companies selling extra capacity from their own internal networks,

* Telecommunications companies exporting their services at extra low prices,

* Other pricing schemes (like a fixed amount per month with unlimited usage),

* New technology (direct transmitting satellites, FM, etc.)

So far, data transporters have been receiving a disproportionate

share of the total costs. For example, the rate for accessing CompuServe from Norway through InfoNet is US$11.00, while using the service itself costs US$12.80 at 2400 bps.

Increased global competition in data transportation is quickly changing this picture, supported by general access to the Internet. Prices will most likely continue their dramatic way toward zero.

Powerful new search tools

As the sheer quantity of information expands, the development of adequate finding tools is gaining momentum. Our major problem is how to use what we have access to.

This is especially true on the Internet. Expect future personal information agents, called "knowbots," which will scan databases all over the online world for specific information at a user's bidding. This will make personal knowledge of where you need to go redundant.

Artificial intelligence will increase the value of searches, as they can be based on your personal searching history since your first day as a user.

Your personal information agents will make automatic decisions about what is important and what is not in a query. When you get information back, it will not just be in the normal chronological order. It will be ranked by what seems to be closest to the query.

Sources for future studies

It seems appropriate to end this chapter with some online services focusing on the future:

Newsbytes has a section called Trends. The topic is computers and communications. ECHO has the free database Trend, the online edition of the Trend Monitor magazine. It contains short stories about the development within electronics and computers (log on to ECHO using the password TREND).

Usenet has the newsgroup clari.news.trends (Surveys and trends). Why not complement what you find here by monitoring trends in associated areas (like music), to follow the development from different perspectives? The music forum RockNet on CompuServe has a section called Trends.

CompuServe's Education Forum has the section Future Talk. What educators think about the future of online services (and education) is always interesting. The Well, based just outside Silicon Valley in the United States, has The Future conference.

UUCP has info-futures. Its purpose is "to provide a speculative forum for analyzing current and likely events in technology as they will affect our near future in computing and related areas." (Contact: info-futures-request@cs.bu.edu for subscription.)

Usenet has comp.society.futures about "Events in technology affecting future computing."

It is tempting to add a list of conferences dedicated to science fiction, but I'll leave that pleasure to you.

Have a nice trip!

Appendix 1:

List of selected online services

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To make a list of online services is difficult. Services come and go. Addresses and access numbers are constantly changed. Only one thing is certain. Some of the details below will be outdated, when you read this.

Affaersdata i Stockholm AB

P.O. Box 3188, S-103 63 Stockholm, Sweden. Tel.: + 46 8 736 59 19.

America Online
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has the CNN Newsroom (Turner Educational Services), The Washington Post, the National Geographic magazine, PC World and Macworld. AOL has tailor-made graphical user interfaces for Apple, Macintosh, and PC compatible computers, and about 300.000 users (in June 1993). Sending and receiving Internet mail is possible.
Contact: America Online, 8619 Westwood Center Dr., Vienna, VA 22182-2285, USA. Phone: +1-703-448-8700.

APC

The Association for Progressive Communications (APC) is a worldwide partnership of member networks for peace and environmental users with host computers in several countries:

Alternex (Brazil). Email: support@ax.apc.org
Chasque (Uruguay). Email: apoyo@chasque.apc.org
ComLink e.V (Germany). Email: support@oln.comlink.apc.org
Ecuanex (Ecuador). Email: intercom@ecuanex.apc.org
GlasNet (Russia). Email: support@glas.apc.org
GreenNet (England). Email: support@gn.apc.org
Institute for Global Communications (U.S.A.), includes EcoNet, PeaceNet, ConflictNet, LaborNet. Email: support@igc.apc.org
Nicarao - CRIES (Nicaragua). Email: ayuda@nicarao.apc.org
NordNet (Sweden). Email: support@pns.apc.org
Pegasus (Australia). Email: support@peg.apc.org
Web (Canada). Email: support@web.apc.org

While all these services are fee based, they bring a wealth of information on environmental preservation, peace (incl. Greenpeace Press Releases), human rights, grant-making foundations, Third World Resources, United Nations Information Service, Pesticide Information Service, and more.

For information about APC, write to apcadmin@igc.apc.org , or APC International Secretariat, Rua Vincente de Souza, 29, 22251-070 Rio de Janeiro, BRASIL. Fax: +55-21-286-0541.

For information about the PeaceNet World News Service, which delivers news digests directly to your email box, send a request to pwn@igc.apc.org.

Bergen By Byte

Norwegian online service with conferences and many files. Modem tel.: +47 05 323781. PDN (Datapak) address: 0 2422 450134. Telnet: oscar.bbb.no (192.124.156.38).

English-language interface available. Annual subscription rates. You can register online. Limited free usage.

BIBSYS

Book database operated by the Norwegian universities' libraries. Send Internet mail to genserv@pollux.bibsys.no with your search word in the subject title of the message.

Big Sky Telegraph

is an online community for educators, business people etc. living in rural areas in North America. Address: 710 South Atlantic, Dillon, Montana 59725, U.S.A.

BITNET

"Because It's Time NETwork" started in 1981 as a small network for IBM computers in New York, U.S.A. Today, BITNET encompasses 3,284 host computers by academic and research institutions all over the world. It has around 243,016 users (source: Matrix News 1993)

All connected hosts form a worldwide network using the NJE (Network Job Entry) protocols and with a single list of nodes. There is no single worldwide BITNET administration. Several national or regional bodies administer the network.

The European part of BITNET is called EARN (European Academic Research Network), while the Canadian is called NetNorth. In Japan the name is AsiaNet. BITNET also has connections to South America. Other parts of the network have names like CAREN, ANSP, SCARNET, CEARN, GULFNET, HARNET, ECUANET, and RUNCOL.

Normally, a BITNET email address looks like this:

NOTRBCAT@INDYCMS

The part to the left of the @-character is the users' mailbox code. The part to the right is the code of the mailbox computer. It is common for Internet users to refer to BITNET addresses like this: NOTRBCAT@INDYCMS.BITNET .

To send email from the Internet to BITNET, it has to be sent through special gateway computers. On many systems, this is taken care of automatically. You type NOTRBCAT@INDYCMS.BITNET, and your mailbox system does the rest.

On some systems, the user must give routing information in the BITNET address. For example, North American mail to BITNET can be sent through the gateway center CUNYVM.CUNY.EDU . To make mail to NOTRBCAT go through this gateway, its mail address must be changed as follows:

NOTRBCAT%INDYCMS.BITNET@CUNYVM.CUNY.EDU

Explanation: The @ in the initial address is replaced with % . Then add the gateway routing: ".BITNET@CUNYVM.CUNY.EDU".

If you must use a gateway in your address, always select one close to where you live. Ask your local postmaster for the correct addressing in your case.

BITNET has many conferences. We call them discussion lists or mailing lists. The lists are usually administered by a computer program called LISTSERV. The dialog is based on redistribution of ordinary email by mailing lists. Consequently, it is simple for users of other networks to participate in BITNET conferences.

A list of discussion lists (at present around 1,600 one-line descriptions) is available by email from LISTSERV@NDSUVM1.BITNET. Write the following command in the TEXT of your message:

LIST GLOBAL

NEW-LIST@NDSUVM1.BITNET and NETMONTH (from BITLIB@YALEVM.BITNET) distribute regular notices about new discussion lists. Subscribe to NEW-LIST by email to LISTSERV@NDSUVM1.BITNET. Use the following command:

SUB NEW-LIST Your-first-name Your-last-name

This is how we usually subscribe to discussion lists. Send your subscription commands to a LISTSERV close to where you live.

The command "SENDME BITNET OVERVIEW" tells LISTSERV to send more information about the services.

BIX

is operated as a joint venture between General Videotex Corp. and the North American computer magazine BYTE (McGraw-Hill). To some extent, it mirrors what you can read on paper. BIX offers global Internet email, telnet and ftp, multiple conferences. In 1992, the service had about 50,000 members.

The NUA address is 0310600157878. On Internet, telnet x25.bix.com . At the Username: prompt, enter BIX as a user name. At the second Username: prompt, enter NEW if you don't already have an account on the service.

You can sign up for the service, and play during your first visit to the service. Read BYTE for more information, or write to General Videotex Corporation, 1030 Massachusetts Ave., Cambridge, MA 02138, USA. Phone: +1-617-354-4137.

BRS

Bibliographic Retrieval Services is owned by InfoPro Technologies (see below). BRS/After Dark is a service for PC users. It can be accessed during evenings and weekends at attractive rates.

InfoPro offers connection through their own network in Europe, and through the Internet. BRS contains about 120 databases within research, business, news, and science. The service's strengths are medicine and health.

Membership in BRS costs US$80 per year, plus hourly database usage charges. It is also available through CompuServe (at a different price).

Contact in Europe: BRS Information Technologies, Achilles House, Western Avenue, London W3 OUA, England. Tel. +44 81 993 9962. In North America: InfoPro Technologies. Tel.: +1-703-442-0900. Telnet: brs.com (US$6/hr).

Canada Remote Systems

is North America's largest bulletin board system (1992). It has a software library of more than 500,000 programs and files, and over 3,500 public forums and discussion areas.

Canada Remote provides several news and information services, including the United Press International and Reuters news wires, North American stock exchange results, the twice-weekly edition of Newsbytes, and other publications.

Tel.: +1-416-629-7000 (in the U.S.) and +1-313-963-1905 (Canada). Canada Remote Systems, 1331 Crestlawn Drive, Unit D, Mississauga, Ontario, Canada L4W 2P9.

CGNET
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is a network interconnecting a group of international research organizations. Besides email, CGNET provides news clipping services, airline reservation information, and database search. (See Dialcom)

Contact: CGNET Services International, 1024 Hamilton Court, Menlo Park, California 94025, USA. Telephone: +1-415-325-3061. Fax: 1-415-325-2313 Telex: 4900005788 (CGN UI) .

CIX (England)

British online-service available by telnet, through PDN services and by direct dial. Telnet cix.compulink.co.uk.

Compulink Information eXchange Ltd. claims to be Europe's largest conferencing system. Sign-up fee (1993): GBP 25.00. Monthly minimum: GBP 6.25. Off-peak connect rate GBP 2.40. Peak rate is 3.60 per hour.

The service has full Internet access, and email exchange with CompuServe and Dialcom. CIX has many conferences, ISDN access, Usenet News, telnet and ftp.

Contact: The Compulink Information Exchange Ltd., The Sanctuary Oakhill Grove, Surbiton, Surrey KT6 6DU, England. Tel.: +44-81-390-8446. Fax: +44-81-390-6561. NUA: 2342 1330 0310. Data: +44-81-390-1255/+44-81-390-1244. Email: cixadmin@cix.compulink.co.uk .

CIX (USA)

The Commercial Internet eXchange is a North American association of commercial Internet providers in which they agree to carry each others' packets of mail, and more.

Clarinet

A commercial network publishing service providing information and news in over 100 newsgroups by subject matter on Usenet. Read Chapter 9 for more information. Single-user (individual) prices available.

Clarinet Communications Corp., 124 King St. North, Waterloo, Ontario N2J 2X8, Canada. Email: info@clarinet.com .

Commercial Mail Relay Service (CMR)

This service is not available anymore. They used to be available on this address:

Intermail-Request@Intermail.ISI.EDU

CompuServe
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has about 1.3 million users (August 93) all over the world, over 1,500 databases, 200 forums, 500 newspapers, online shopping from more than 100 shops and entertainment. It's like a large electronic supermarket.

You can access the service though local access numbers in over 100 countries, through Packet Switching Services, and outdial services. The international NUA address is 0313299999997.

A list of available forums can be retrieved from the IBM Communication Forum. Participation in forums is normally free (no extra charge).

The IQuest database service gives access to more than 800 publications, databases, and indexes within business, public

affairs, research, news, etc. Bibliographic and full-text searches.

Some IQuest databases are physically residing on other online services, like NewsNet, Dialog, BRS, and Vu/Text (U.S.A.), Data-Star (Switzerland), DataSolve (England. It has TASS in the World Reporter database), and Questel (France). Sometimes, it is cheaper to use these services on CompuServe, than by a call to these services directly.

The connect charge for CompuServe's Alternative Pricing Plan is US$12.80/hour at 1200 and 2400 bps. 9600 bps costs US$22.80/hour. Monthly subscription US$2.50. Using the Executive News Service (clipping service) costs an extra US$15/hour.

An optional flat-rate pricing plan (the Standard Pricing plan) is available for US$8.95 per month. It gives unlimited access to over 30 basic services, including CompuServe mail, The Electronic Mall, news, weather and sports, member support services, reference and travel services.

Hourly rates for Standard Pricing Plan members using extended services go from US$6/hour for 300 bits/s to US$16/hour for 9600 bits/s access. (Feb. 93)

In addition, there are network charges. These differ a lot by country. For example, access through European CompuServe nodes has no communication surcharges during non-prime time (19:00-8:00 local time).

CompuServe can be accessed by telnet to hermes.merit.edu, or 35.1.48.150. Host: CompuServe.

CompuServe Information Services Inc., POB 20212, 5000 Arlington Centre Blvd., Columbus, Ohio 43220, U.S.A.

In Europe, call voice: +49-89-66550-111, fax: +49-89-66 550-255 or write to CompuServe, Jahnstrasse 2, D-8025 Unterhaching b., Munich, Germany. To contact CompuServe Africa, call (012) 841-2530 in South Africa, or (+27)(12) 841-2530 for everywhere else.

Cosine

COSINE (Cooperation for Open Systems Interconnection Networking in Europe) is a European Common Market "Eureka" project. It works to establish a communications network infrastructure for scientific and industrial research institutes all over Europe.

IXI is the international packet data network on which the COSINE project is based. It is available Europe-wide providing links of up to 64 Kbit/s, carries non commercial traffic for the research communities, and provides links to several public data networks.

The CONCISE online information service is a focal point for information of interest to European researchers. It has lists of sources of information.

Internet users can access CONCISE through Telnet. Connect either to concise.ixi.ch (130.59.2.16) or concise.funet.fi (128.214.6.181). Login: concise, password: concise.

For help, send email to helpdesk@concise.level-7.co.uk with the following command in the body of the text:

```
start
help cug-email
```

This will give you the `CONCISE User Guide - Email Access'.

DASnet

forwards mail between systems that do not have any email exchange agreements. See description in Chapter 13. Contact: DA Systems,

Inc., 1503 E. Campbell Ave., Campbell, CA 95008, U.S.A.

DataArkiv

Major Scandinavian online service based in Sweden. Contact: DataArkiv, Box 1502, 171 29 Solna, Sweden. Fax: +46 8 828 296. Tel.: +46 8 705 13 11.

Data-Star

Formerly owned by Radio-Suisse in Switzerland, Data-Star is now owned by Knight-Ridder (U.S.A.). It offers over 200 databases within business, science and medicine.

SciSearch is a database with references to over nine million stories from 4500 newspapers and magazines.

Other databases: Current Patents Fast Alert, Flightline (with stories about air transport), The Turing Institute Database on artificial intelligence, Information Access (international market data), parts of SovData, Who Owns Whom, etc..

Access through Internet: telnet to rserve.rs.ch [192.82.124.4] and login as rserve , and follow standard login procedure.

Contact in North America: D-S Marketing, Inc., Suite 110, 485 Devon Park Drive, Wayne, PA 19087, Tel.: +1-215-687-6777.

Contact in Scandinavia: Data-Star marketing AB, Maessans gt. 18, Box 5278, S-402 25 Gothenburg, Sweden. Tel.: +46 31 83 59 75.

Delphi

has full access to Internet. Write to: General Videotex Corp., 1030 Massachusetts Ave., Cambridge, MA 02138, USA.

Dialcom

is owned by British Telecom and is a network of data centers in many countries. Dialcom is selling its services through many agents (like EsiStreet for the music industry, and CGNet for agricultural research).

Some selected services: The Official Airline Guide, news (Financial Times Profile, Newsbytes, AP, UPI, and Reuters), mail (Dialcom400), fax services and several conference type offerings (like Campus 2000 for the education market).

Today, most Dialcom users are unable to exchange mail with the Internet (DASnet is a commercial alternative), but mail can be sent to users of SprintMail, IBM Mail, AT&Ts Easylink, MCI Mail, Compania Telefonica Nacional de Espana, and other X.400 systems.

Contact: Dialcom, 6120 Executive Blvd., Rockville, MD 20852, U.S.A. The British service Telecom-Gold is a subsidiary of Dialcom UK. In North America, contact BT North America at tel.: +1-408-922-7543. In Europe, contact British Telecom.

CGNET can be reached through the Internet. Send a message to postmaster@cgnet.com for more information.

Dialog Information Services

is owned by Knight Ridder and has more than 400 databases online. They offer a long list of newspapers including the San Francisco Chronicle in full-text, Newsbytes, Information Access, the Japan Technology database, most major global news wires, Trademarkscan, USA Today, Teikoku Databank from Japan.

Knowledge Index offers evening and weekend reduced-rate access to more than 100 popular full-text and bibliographic databases and

50,000 journals (1993).

Dialog has gateways to other services, like CompuServe and iNet, making the databases available to a larger market. Many databases are also available on CD-ROM.

In Europe, contact DIALOG Europe, P O Box 188, Oxford OX1 5AX, England. You can telnet to DIALOG.COM (192.132.3.254, US$ 3/hour in 1992).

Down Jones News/Retrieval

focuses on news for finance and business. DJN/R is the sole online distributor of The Wall Street Journal (with articles from the international editions), Barron's, Dow Jones and Telerate's newswires in full-text.

Further, it has PR Newswire, many other newspapers in full-text, clipping service, online charting for investors, and gateways to other services like Info Globe (Globe and Mail in Canada).

Address: P.O. Box 300, Princeton, N.J. 08543-9963. DJN/R is also accessible through a gateway from MCI Mail.

You can telnet to djnr.dowjones.com . At the WHAT SERVICE PLEASE prompt, enter DJNR and press Enter. An ENTER PASSWORD prompt will appear. Here, enter your normal DJNS account password.

ECHO

European Commission Host Organization is accessible via CONCISE. Telnet either to concise.ixi.ch (130.59.2.16) or concise.funet.fi (128.214.6.181). Login: concise, password: concise. The NUA address is 0270448112. You can also telnet to echo.lu . Login as echotest or echo.

ECHO's I'M GUIDE is a free database providing information about online services within the European Common Market. It includes CD-ROMs, databases and databanks, database producers, gateways, host organizations, PTT contact points, and information brokers in Europe.

ECHO's other databases are classified under the headings Research and development, Language industry, Industry and economy.

For information contact: ECHO Customer Service, BP 2373, L-1023 Luxembourg. Tel.: +352 34 98 1200. Fax: +352 34 98 1234.

Exec-PC Network BBS

is based in Milwaukee (Wisconsin, U.S.A.). In August 1991, it had 238 incoming phone lines, 9 gigabytes of disk capacity, more than 100 new programs/day, 300,000 programs available for downloading (including the complete selection from PC-SIG California) and more than 130,000 active messages in its conferences. More than 3,300 persons called EXEC-PC each day.

The service focuses on owners of IBM compatible computers (MS/PC-DOS, Windows, OS/2, Windows, Unix), Apple Macintosh, Amiga and Atari ST through over 200 conferences.

You can access EXEC-PC through i-Com's outdial service, Global Access, PC-Pursuit, Connect-USA, and by direct dialing. Annual subscription costs US$60.00. You can sign on while online. Unregistered users get thirty minutes per day free.

FidoNet

was founded in 1984 for automatic transfers of files from one place to the other at night, when the telephone rates are low. FidoNet is one of the most widespread networks in the world. It consists

mainly of personal computers (IBM/Amiga/Macintosh...).

FidoNet systems exchange documents by using a modem and calling another FidoNet system. Communication can be either direct to the destination system (calling long distance) or by routing a message to a local system.

Each computer connected to FidoNet is called a node. There are nodes in around 70 countries. In June 1993, the net had 24,800 nodes throughout the world (source: FidoNet nodelist). The number of nodes is growing at about 40 percent per year.

Most nodes are operated by volunteers, and access is free. FidoNet is believed to have over 1.56 million users (1992).

Conferences (called ECHOs or Echomail) are exchanged between interested nodes, and may thus have thousands of readers. A typical FidoNet Echomail conference gets 50 to 100 messages each day. Any connected BBS may carry 50, 100, or more echomail conferences.

Net Mail is the term for storing and delivering mail. FidoNet users can send and receive mail through the Internet.

The list of member bulletin boards is called the Nodelist. It can be retrieved from most boards. Each node has one line on this list, like in this example:

```
   ,10,Home_of_PCQ,Warszawa,Jan_Stozek,48-22-410374,9600,V32,MNP,XA
```

The commas are field separators. The first field (empty in this example) starts a zone, region, local net, Host, or denotes a private space (with the keyword Pvt).

The second field (10) is the node number, and the third field (Home_of_PCQ) is the name for the node.

The fourth field (Warszawa) is a geographical notation, and the fifth field (Jan_Stozek) is the name of the owner. The sixth field is a telephone contact number, and the other fields contain various technical information used in making connections.

FidoNet has six major geographical zones: (1) North America, (2) Europe, etc., (3) Oceania, (4) America Latina, (5) Africa, (6) Asia.

For information, contact the International FidoNet Association (IFNA), P.O. Box 41143, St. Louis, MO 63141, U.S.A. You can also write to postmaster@fidonet.fidonet.org .

The FIDO subdirectory in the MSDOS directory on SIMTEL20 (on the Internet) contains extensive information, including explanation of FidoNet, guide for its nodes, gateways between FidoNet and Internet, and various programs and utilities. (See TRICKLE in Chapter 4 for more about how to get these files.)

Fog City Online Information Service

is the world's largest bulletin board with AIDS information. Based in San Francisco (U.S.A.) it offers free and anonymous access for everybody.

Call +1-415-863-9697. Enter "AIDS" by the question "First name?" and "INFO" by the question "Last Name?".

FT Profile

has full-text articles from Financial Times in London, from several European databases (like the Hoppenstedt database with more than 46,000 German companies), and the Japanese database Nikkei.

Profile is available through Telecom-Gold, and can also be accessed through other online services. Clipping service. CD-ROM.

Contact FT Information Services at tel.: +44-71-873-3000.

GEnie

General Electric Network for Information Exchange is GE's Consumer Information Service. GEnie gives access to many databases and other information services. It has around 350,000 users (1992).

The basic rate is US$4.95/month plus connect charges. The surcharge is US$18/hour between 08:00 and 18:00, and US$6.00/hour for some services, like email, downloading of software, "chat," conferences, and multi-user games. Access to Internet email is available as a surcharged add-on service. (Addressing format: userid@GEnie.GEis.com)

For information call +1-301-340-4492. GE Information Services, 401 N. Washington St., Rockville, MD 20850, U.S.A.

GE Information Service Co. (GEIS)

Online service operated by General Electric. Available in over 32 countries. GEIS' QUIK-COMM service integrates multinational business communications for public and private mail systems. Its services include Telex Access; and QUIK-COMM to FAX, which allows users to send messages from their workstations to fax machines throughout the world. Contact: tel. +1-301-340-4485

GENIOS

German online service (tel.: +49 69 920 19 101). Offers information from Novosti (Moscow), data about companies in the former DDR, the Hoppenstedt business directories, and more.

GlasNet
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is an international computer network that provides lowcost telecommunications to nonprofit, nongovernment organizations throughout the countries of the former Soviet Union. Email, fax, telex, public conferences.

For nonprofit, nongovernmental organizations, basic GlasNet service fees are 350 rubles/month after a one-time registration fee of 1000 rubles. This does not include faxes or telexes. (1992)

Write to: GlasNet, Ulitsa Yaroslavskaya 8, Korpus 3 Room 111, 129164 Moscow, Russia. Phone: (095) 217-6182 (voice). Email: fick@glas.apc.org .

Global Access
----
is a North American outdial service (see Chapter 13) owned by G-A Technologies, Inc. It has an information BBS at +1-704-334-9030.

IASNET

The Institute for Automated Systems Network was the first public switched network in the xUSSR. Its main goal is to provide a wide range of network services to the scientific community in the xUSSR, including access to online databases, a catalog of foreign databases, and conferencing (ADONIS).

IBM Information Network

The IBM Information Network, based in Tampa, Florida, is IBM's commercial value-added data network offering the ability to send email and data worldwide. It is one of the largest networks in the

world, with operator-owned nodes in over 36 countries.

To send mail from the Internet to a user of Advantis IBMmail (also called IMX or Mail Exchange), address to their userid at ibmmail.com. You need to know their userid (IEA in IBMmail terminology) in advance.

An IBMmail user can find how to address to Internet by sending mail to INFORM at IBMmail with /GET INET in the body of the text.

i-Com

offers outdial services to North America (ref. Chapter 13). Contact: i-Com, 4 Rue de Geneve B33, 1140 Brussels, Belgium. Tel.: +32 2215 7130. Fax: +32 2215 8999. Modem: +32 2215 8785.

ILINK (Interlink)

is a network for exchange of conferences between bulletin boards in U.S.A., Canada, Scotland, England, Norway, France, Australia, New Zealand, Sweden, and other countries.

Infonet

is a privately owned vendor of packet data services with local operations in over 50 countries, and access from more than 135 countries. Contact: Infonet Services Corp., 2100 East Grand Ave., El Segundo, CA 90245, U.S.A.

INTERNET

started as ARPANET, but is now a large group of more than 6,000 interconnected networks all over the world supporting mail, news, remote login, file transfer, and many other services. All participating hosts are using the protocol TCP/IP.

There are around 1.3 million host computers with IP addresses (March 1992. Ref. RFC1296 and RFC 1181). The number of users is estimated to more than ten million people. Some one million people are said to exchange email messages daily.

In addition, private enterprise networks have an estimated 1,000,000 hosts using TCP/IP (Source: Matrix News August 1993.) These offer mail exchange with the Internet, but not services such as Telnet or FTP to most parts of the Internet, and are estimated to have some 7.5 million users.

Some claim that these figures are low. They believe it is possible to reach around 50 million mailboxes by email through the Internet.

Several commercial companies offer full Internet services. Among these are Alternet (operated by UUNET) and PCI (operated by Performance Systems, Inc.). The UK Internet Consortium offers similar services in Great Britain.

INTERNET gives users access to the ftp and telnet commands. Ftp gives them interactive access to remote computers for transferring files. Telnet gives access to a remote service for interactive dialog.

The Interest Groups List of Lists is a directory of conferences available by ftp from ftp.nisc.sri.com (192.33.33.53). Log in to this host as user "anonymous." Do a 'cd' (change directory) to the "netinfo" directory, then enter the command "GET interest-groups." The list is more than 500 KB characters long.

You can also get it by email from mail-server@nisc.sri.com . Write the following command in the TEXT of the message:

Send netinfo/interest-groups

You can telnet several bulletin boards through Internet. Here is a sample:

Name	Login as	Description
CONRAD.APPSTATE.EDU	info	World news collected by monitoring short wave broadcasts from BBS and other global sources.
ISCA.ICAEN.UIOWA.EDU	ISCABBS	A large amount of public domain programs
ATL.CALSTATE.EDU	LEWISNTS	Electronic newspapers and the Art World.
TOLSUN.OULU.FI	BOX	Finnish service. English available as an option.

"Internet Services Frequently Asked Questions and Answers" can be retrieved by email from mail-server@rtfm.mit.edu . Write

send usenet/news.answers/internet-services/faq

in the body of your message.

Internet

is a term used on something many call "WorldNet" or "The Matrix." It includes the networks in INTERNET, and a long list of networks that can send electronic mail to each other (though they may not be based on the TCP/IP protocol).

The Internet includes INTERNET, BITNET, DECnet, Usenet, UUCP, PeaceNet, IGC, EARN, Uninett, FidoNet, CompuServe, Alternex (Brazil), ATT Mail, FredsNaetet (Sweden), AppleLink, GeoNet (hosts in Germany, England, U.S.A.), GreenNet, MCI Mail, MetaNet, Nicarao (Nicaragua), OTC PeaceNet/EcoNet, Pegasus (Australia), BIX, Portal, PsychNet, Telemail, TWICS (Japan), Web (Canada), The WELL, CARINET, DASnet, Janet (England)

"Answers to Commonly Asked New Internet User' Questions" is available by email from SERVICE@NIC.DDN.MIL . Send email with the following command in the message's SUBJECT heading:

RFC 1206

One important feature of the Internet is that no one is in charge. The Internet is essentially a voluntary association.

Another thing is that there are rarely any additional charges for sending and receiving electronic mail (even when sending to other networks), retrieving files, or reading Usenet Newsgroups..

Intermail

See Commercial Mail Relay Service.

Istel

A privately owned vendor of packet data services, who has operator-owned nodes in Belgium, Canada, France, Germany, Italy, Japan, Holland, Spain, Sweden, England. Contact: AT&T Istel. Tel.: 0527-64295 (in England).

Kompass Online and Kompass Europe

These databases are available through many services, including Affaersdata in Sweden and Dialog. Contact: (voice) +47 22 64 05 75.

InfoPro Technologies

Previously Maxwell Online. InfoPro's services include BRS Online and Orbit Online. BRS owns BRS Online, BRS Colleague, BRS After Dark, and BRS Morning Search, which focus on medical information. Orbit focuses on patent and patent-related searches.

Orbit carries an annual membership fee of US$50 (1992), and hourly fees that differ according to database.

Contact: InfoPro Technologies, 8000 Westpark Drive, McLean, VA 22102, U.S.A. Tel.: +1-703-442-0900.

Maxwell Online

See InfoPro Technologies.

MCI Mail

MCI Mail, Box 1001, 1900 M St. NW, Washington, DC 20036, U.S.A.

Mead Data Central

operates the Nexis and Lexis services. Contact: Mead Data Central International, International House, 1, St. Katharine's Way, London E1 9UN, England.

TELNET lexis.meaddata.com or 192.73.216.20 or 192.73.216.21 . Terminal type = vt100a. Note: If characters do not echo back, set your terminal to "local" echo.

MetaNet

Contact: Metasystems Design Group, 2000 North 15th Street, Suite 103, Arlington, VA 22201, U.S.A. Tel.: +1-703-243-6622.

MIX

A Scandinavian bulletin board network exchanging conferences. For information, call Mike's BBS in Norway at the following numbers: +47-22-416588, +47-22-410403 and +47-22-337320.

Minitel

French videotex service, which is being marketed all over the world. It is based on a special graphics display format (Teletel), has over 13,000 services, and appears like a large French online hypermarche with more than seven million users (1992).

Access to the French Minitel network is available via the Infonet international packet data network on a host-paid and chargeable account basis.

Mnematics

Mnematics, 722 Main Street Sparkill, NY 10976-0019, U.S.A. Tel.: +1-914-359-4546.

NEC PC-VAN

Japan's largest online service measured both in number of users and geographical presence. Your communications system must be able to display Japanese characters to use the service.

Netnews

See Usenet.

NewsNet

The world's leading vendor of full-text business and professional newsletters online. Offers access to over 700 newsletters and news services within 30 industry classification groups (1993). Includes the major international news wires.

You can read individual newsletter issues, and search back issues or individual newsletters or publications within an industry classification. NewsNet's clipping service is called NewsFlash. Enter PRICES at the main command prompt for an alphabetic listing of all available services.

Contact: NewsNet, 945 Haverford Rd., Bryn Mawr, PA 19010, U.S.A.

NIFTY-Serve

is Japan's number 2 online service. It had 250,000 subscribers in January 1992. Access is possible via a gateway from CompuServe. Your communications system must be able to display Japanese characters to use the service.

Nifty-Serve is jointly operated by Fujitsu and Nissho Iwai Trading in a licensing agreement with CompuServe.

NWI

Networking and World Information, Inc. One time subscription fee: US$20 (US$5 is given to charity. US$15 is returned to the user as free time). Non-prime time access costs US$10.70/hour at 300 to 2400 bps. Otherwise, the rate is US$23.50. The service is available through PDN and outdial services. (1992)

Contact: NWI, 333 East River Drive, Commerce Center One, East Hartford, CT 06108, U.S.A. Tel.: +1-203-289-6585.

CompuServe users can access NWI's PARTICIPATE conferences through a gateway.

OCLC

is a nonprofit computer library service and research organization whose computer network and products link more than 15,000 libraries in 47 countries and territories. It serves all types of libraries, including public, academic, special, corporate, law, and medical libraries. Contact: OCLC, 6565 Fratz Rd., Dublin, OH, U.S.A. Tel.: +1-614-764-6000.

Orbit

is owned by InfoPro Technologies (formerly Maxwell Online and Pergamon Orbit Infoline Inc.). It offers more than 100 science, technical and patent research, and company information databases.

Contact in North America: InfoPro Technologies, 8000 West Park Drive, McClean, VA 22102, U.S.A. Tel.: +1-703-442-0900.

In Europe: ORBIT Search Service, Achilles House, Western Avenue, London W3 0UA, England. Tel.: +44 1 992 3456, Fax. +44 1 993 7335. Telnet orbit.com (US$6/hr in 1992).

Pergamon Financial Data Services

See Orbit.

Polarnet

is a Scandinavian distributed conferencing system available through many boards, including Mike's BBS (see above).

Prestel

is owned by British Telecom. It is a videotex service based on a special graphics display format. The service is also available as "TTY Teletype." NUA address: 02341 10020020.

Prodigy

is a North American videotex service owned by IBM and Sears. You must have a special communications program to use the service, which claimed 2.5 million subscribers in early 1992. (Analysts estimated only 850,000 paying users).

Rates: US$12.50 per family per month for up to six family members and up to 30 email messages. Annual subscription: US$ 119.95. The packet sent new users contains a communication program and a Hayes-compatible 2400 bps modem. Price: US$ 180. (early 1992)

Contact: Prodigy Services Co., 445 Hamilton Ave., White Plains, NY 10601, U.S.A. Tel.: +1-914-962-0310. Email (through Internet): postmaster@inetgate.prodigy.com .

RelayNet

Also called PcRelay-Net. An international network for exchange of email and conferences between more than 8,500 bulletin boards. The Relaynet International Message Exchange (RIME) consists of some 1,000 systems (1992).

Relcom

means 'Russian Electronic Communications.' This company provides email, other network services, a gateway to Internet, and access to Usenet.

In early 1992, RELCOM had regional nodes in 25 cities of the xUSSR connecting over 1,000 organizations or 30,000 users. RELCOM has a gateway to IASNET.

Saltrod Horror Show

Odd de Presno's BBS system. Tel.: +47 370 31378.

The Sierra Network

is one of the best things out there for online games. The service claimed more than 20,000 subscribers in 1993. Contact: The Sierra Network, P.O. Box 485, Coarsegold, CA 93614, U.S.A.

SIGnet

Global BBS network with over 2500 nodes around the world (1993).

SIMTEL20 Software Archives
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is a system maintained by the US Army Information System Command. It contains public domain software, shareware, documentation and mail archives under the following top-level headings: HZ100, INFO-IBMPC, MSDOS, PC-BLUE, ADA, ARCHIVES, CPM, CPMUG, PCNET, SIGM, STARS, UNIX-C, VHDL, ZSYS, MACINTOSH, MISC, and TOPS20.

All files are accessible by Anonymous FTP. For information, send a message to the address LISTSERV@RPIECS.BITNET with the command 'HELP' in the first line of your text.

SprintMail
---
is a large, commercial vendor of email services. It has local nodes serving customers in 108 countries through its SprintNet network (1991).

Internet mail to the SprintMail user identity 'T.Germain' can be sent to T.Germain@sprint.sprint.com .

For information, contact SprintMail, 12490 Sunrise Valley Dr., Reston, VA 22096, U.S.A.

SuperNET
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is an international network for exchange of conferences and mail between SuperBBS bulletin board systems. Contact: SuperNet World Host through FidoNet at 2:203/310 (+46-300-41377) Lennart Odeberg.

TCN
---
is a Dialcom network. Internet email to TCN is only possible if either the sender or recipient has registered with DASnet. The email address would be: TCNxxx@das.net (where xxx is the TCN number).

Thunderball Cave

Norwegian bulletin board connected to RelayNet. Call +47-22-299441 or +47-22-299442. Offers Usenet News and Internet mail.

Tocolo BBS

Bulletin board for people with disabilities in Japan, or with "shintaishougaisha," which is the Japanese term. Call: +81-3-205-9315. 1200 bps, 8,N,1. Your communications system must be able to display Japanese characters to use the service.

TRI-P

International outdial service. Contact: INTEC America, Inc., 1270 Avenue of the Americas, Suite 2315, New York, NY 10020, U.S.A. In Japan, contact Intec at 2-6-10 Sarugaku-cho, Chiyoda-ku, Tokyo 101. Fax: +81-3-3292-2929.

TWICS BeeLINE

English-language Japanese online service with PARTIcipate, Caucus and Usenet netnews. Half the users are Japanese. Others connect from U.S.A., England, Canada, Germany, France, South Africa, and Scandinavia.

The NUA address is: 4406 20000524. Direct call to +81 3 3351 7905 (14,4KB/s), or +81-3-3351-8244 (9600 bps). At CONNECT, press

ENTER a few times. Wait about a second between keystrokes to get to the registration prompt.

New users can sign on as GUEST for information. You can also write postmaster@twics.co.jp, or send mail to TWICS/IEC, 1-21 Yotsuya, Shinjuku-ku, Tokyo 160, JAPAN.

Foreign users have free access (1992).

UMI/Data Courier

620 South Street, Louisville, KY 40202, U.S.A.

Uninett

delivers networking services to Norwegian research and educational services.

Unison

North American conferencing service using PARTIcipate software. NUA address: 031105130023000. Password: US$35.00. Monthly subscription: US$6.25. Non-prime time access: US$12.00/hour. Prime time access: US$19.00/hour. Enter SIGNUP when online the first time and follow the prompts. (1991)

UUCP

UUCP (UNIX to UNIX Copy) is a protocol, a set of files and a set of commands to copy files from one UNIX computer to another. This copying procedure is the core of the UUCP network, a loose association of systems all communicating with the UUCP protocol.

UNIX computers can participate in the UUCP network (using leased line or dial-up) through any other UNIX host. The network now also has many MS-DOS and other hosts, and consisted of 16,300 hosts in January 1993 (source: UUCP map) serving more than 489,000 users.

The UUCP network is based on two systems connecting to each other at specific intervals, and executing any work scheduled for either of them. For example, the system Oregano calls the system Basil once every two hours. If there's mail waiting for Oregano, Basil will send it at that time. Likewise, Oregano will at that time send any mail waiting for Basil.

There are databases with connectivity information (UUCP maps), and programs (pathalias) that will help you decide the correct routing of messages. However, many UUCP hosts are not registered in the UUCP map.

EUNET is a UUCP based network in Europe. JUNET is an equivalent network in Japan. There are many gateway machines that exchange mail between UUCP and the Internet. Among these, UUNET.UU.NET is among the most frequently used.

Usenet

Usenet, Netnews, or just "News" are common terms for a large many-to-many conferencing (only) system distributed through UUCP, Internet, FidoNet, and BITNET.

This grassroots driven "network" has grown out of the global university and research domains. It is a service rather than a real network. It is not an organization, and has no central authority.

Usenet's newsgroups are carried by over 69,000 host computers in five continents, and has over 1,991,000 users (source: Brian Reid, 1993). Many of these hosts have access to the Internet. The

European portion of Usenet is called EUNET (European Unix NET).

The local administrator of each individual node in the network decides what newsgroups to receive and make available to its users. Few systems offer access to all of them.

NetNews is organized in groups of 'conferences'. Each of these classifications is organized into groups and subgroups according to topic. As of June 1, 1993, there were 4500 newsgroups and 2500 regional newsgroups. Several sites are carrying over 2600 topics.

The groups distributed worldwide are divided into seven broad classifications:

"comp" Topics of interest to both computer professionals and hobbyists, including topics in computer science, software source, and information on hardware and software systems.

"sci" Discussions marked by special and usually practical knowledge, relating to research in or application of the established sciences.

"misc" Groups addressing themes not easily classified under any of the other headings or which incorporate themes from multiple categories.

"soc" Groups primarily addressing social issues and socializing.

"talk" Groups largely debate-oriented and tending to feature long discussions without resolution and without appreciable amounts of generally useful information.

"news" Groups concerned with the news network and software themselves.

"rec" Groups oriented towards hobbies and recreational activities.

Also available are many "alternative" hierarchies, like:

"alt" True anarchy; anything and everything can and does appear. Subjects include sex, and privacy.

"biz" Business-related groups

"clari" Newsgroups gatewayed from commercial news services and other 'official' sources. (Requires payment of a fee and execution of a licence. More information by email to info@clarinet.com).

Most Netnews hosts offer both global and local conferences. Many newsgroups can be read through bulletin boards, commercial online services, or through gateways from connected hosts (like from some BITNET hosts).

A full list of available groups and conferences are normally available from hosts offering Netnews, and on NETNEWS servers.

All users should subscribe to news.announce.important .

Vu/Text
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325 Chestnut St., Suite 1300, Philadelphia, PA 19106, U.S.A.

The Well

The Whole Earth Lectronic Link is a commercial online service based in Sausalito (U.S.A.). It has its own conferencing culture and is an interesting starting point for those wanting to "study" what makes the area around Silicon Valley so dynamic.

The Well has several hundred conferences, public and private, about 7,000 members, and is available in a variety of ways. The service has full Internet access, and can be reached by telnet to well.sf.ca.us (or 192.132.30.2).

Modem tel.: +1-415-332-6106 at 1200 bps or +1-415-332-7398 at 2400 bps. You can subscribe online. Rates: US$ 20/month plus US$ 2/hour (invoiced by the minute online - 1992).

ZiffNet
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markets its services through CompuServe (ZiffNet and ZiffNet/Mac), Prodigy, and its own online service in the U.S.A. Their offerings include the Ziff Buyer's Market, the ZiffNet/Mac Buyer's Guide, Computer Database Plus, Magazine Database Plus, NewsBytes, and the Cobb Group Online.

Contact: Ziff Communications Company, 25 First Street, Cambridge, MA 02141, U.S.A. Tel.: +1-617-252-5000.

Appendix 2:

Short takes about how to get started

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* a computer
* modem and a communications program

You must have a computer

It is not important what kind of computer you have, though you may find out that it is an advantage to have a popular one. The most common type of microcomputer today is called MS-DOS computers (or IBM PC compatibles or IBM clones).

Your computer should have enough memory for communication. This is seldom a problem. An MS-DOS computer with 256 KB RAM is enough when using popular programs like PROCOMM.

Your computer does not have to be very powerful and super fast, unless you want ultra fast transfers, use a slow communications program, or a complex system of script files. If this is the case, you'll know to appreciate speed and power.

You do not need a hard disk. Many do without. Not having one, however, means more work, and less room for storage of all the nice things that you may want to retrieve by modem.

Personally, I want as much hard disk space as I can possibly get. When you have read the book, I guess you'll understand why.

Others may want to delay the purchase of a hard disk until they can spare the money. If you can afford it, however, do it! It is a decision that you'll never regret.

You must have a modem

Some computers are always connected to a network. If this is your

situation, then you probably have what you need already. The rest of us need a modem.

A modem is a small piece of equipment that is translating the internal, electrical signals of the computer to sound codes. These codes can be sent over an ordinary telephone line. You may think of it as a type of Morse alphabet.

The recipient of data also needs a modem. In his case, the sound codes will have to be translated back into their original form as digital codes. When this is done, he can view text and pictures on the screen, and use the received data in other applications.

You can buy modems on an expansion card for installation in your computer, or in a separate box. Often, a modem has already been built into the computer, when you buy it.

Whether to buy an internal or an external modem is a question of needs:

A portable computer with an internal modem is easier to bring on travels than an external modem with a modem cable and a power adapter.

An external modem can serve several computers. Some of them are so compact that they fit besides your toothbrush in the toilet bag.

An internal modem blocks one of your serial ports.

External modems

The options are many. The modems differ on speed, features, prices - and whether they are approved for usage in your country.

Some of them are connected to the phone line by cable. Others are connected to the handset (to the talk and listen part) by two rubber cups. We call such modems acoustic modems (or acoustic couplers).

Acoustic modems are useful where connecting other modems to the telephone is difficult. The bad news is that you'll get more noise on the line. Acoustic modems can therefore not be recommended for use in other cases.

Asynchronous or synchronous modems?

Formerly, data communication was done by sending job commands to a mainframe computer, and having the result returned in one batch. The modems were called synchronous. Such modems (and computers) are still in use in some large corporations.

Most of today's online services are based on an interactive dialog between the user and the remote computer. The user enters a command, for example a letter or a number in a menu, and the result is returned almost immediately. The modems used for such work are called asynchronous (See "Explanation of some words and terms" in appendix 4).

Unless you know that you must have a synchronous modem, buy an asynchronous one.

Choice of speed

Speed is measured in many ways. One method is to use baud. Another is to use characters per second (cps) or bits per second (bps).

Bps is a measure of how many data bits that can be transferred over a data channel in one second. (Each byte is split up into bits before transfer during serial communication.)

The relationship between baud and bits per second is complex, and often misused. Bits per second is unambiguous. In this book, we will use it as bps.

We can estimate the number of characters per second by dividing

the number of bps by ten. For example. 1200 bps is roughly 120 cps.

In 1987, 300, 1200 and 2400 bps asynchronous modems were the standard in many countries. Around 1990, the growth in 9600 bps modems and modem with faster speeds gained momentum.

Modem user manuals often give transfer speed by referring to some international classification codes. Here are some CCITT codes with explanation:

V.21	0-300 bps full duplex	Still used by a small group. Cannot communicate with the American Bell 103 standard.
V.22	1200 bps full duplex	Partly compatible with the American Bell 212a standard. Sometimes it works, sometimes it fails.
V.22bis	2400 bps full duplex	Used all over the world. Very common.
V.23	600 & 1200 bps w/75 bps return ch.	Rare protocol. Used mainly in Europe. Half duplex.
V.26ter	2400 bps full duplex	Used mainly in France
V.27ter	2400/4800 bps half duplex	Used in Group III fax
V.29	4800, 7200 and 9600 bps half duplex	Used in gr. III fax and in some (American) modems. Do not buy V.29 if you want a 9600 bps modem.
V.32	4800/9600 bps full duplex	Current standard for 9600 bps modems
V.32bis	4800/7200/9600, 12000/14400 bps	Full duplex with faster interrogation.
V.34	14400 bps	A proposed high speed protocol that never made it.
V.42		Error correction protocol (an appendix yields compatibility w/MNP gr. 2,3 and 4 (see MNP below). For V.22, V.22bis, V.26ter and V.32.
V.42bis		Data compression for V.42 modems. Meant to replace MNP and LAP. Text can be transferred three times faster than with MNP, i.e., in up to 38400 bps using a 9600 bps modem. Very common.
V.Fast also called V.32terbo		Upcoming standard. If approved by CCITT, it will support speeds to 28,800 bps for uncompressed data transmission rates over regular dial-up, voice-grade lines. Using V.42bis data compression, up to 86,400 bps may be achievable.

When you consider buying a modem with higher speed, remember that going from 1200 bps to 2400 is a 50 percent increase, while going from 1200 to 9600 bps gives 800 percent!

On the other hand, if you currently have 9600 bits/s, going to 14.400 will only give you 50 percent.

MNP error correction and compression

The Microcom Networking Protocol (MNP) is a U.S. industry standard for modem-to-modem communication with automatic error correction and compression.

Automatic error correction is useful when there is noise on the telephone line. MNP splits the stream of data up into blocks before transmission. They are checked by the other modem upon receipt. If the contents are correct, an acknowledge message is sent back to the sending modem. If there has been an error in the transmission, the sending modem is asked to retransmit.

When using compression, files are being preprocessed before transmission to decrease their size. The result is that the modem has to send fewer bytes, and the effect is higher speed.

MNP Level 3 and up send data between two modems synchronously rather than asynchronously. Since sending a start and stop bit with each transferred byte is no longer required, the effect is higher speed.

MNP-4 or higher have automatic adjustment of block length when there is noise on the line. If the line is good, longer blocks are sent. The block size is decreased if the line is bad causing many retransmissions.

MNP-5 has data compression. This gives a further increase in transfer speed by from 10 to 80 percent depending on the type of data sent. MNP-7 is capable of a three-to-one compression ratio.

Both users must have their modems set for MNP to use it.

The speed of the computer's COMM port

Installing a super fast modem does not guarantee an increase in the effective transfer speed. The serial port of your computer may be a limiting factor.

Owners of older MS-DOS computers often have UARTs (serial port processors) in the Intel 8250 or National 16450 series. With these in the computer, it is difficult to achieve speeds above 9600 bps without losing data.

Take this into account when investing in a modem.

MNP and efficiency

I call my bulletin board daily. My personal computer is set to communicate with a V.32 modem at 19,000 bps. The modem sends data to the telephone line at 9600 bps, which is this modem's maximum line speed.

Data is received by the remote computer's V.32 modem at 9600 bps, and forwarded to bulletin board at 19200 bps.

Why these differences in speed?

MNP level 5 compresses data in the modem before transfer, and gives error-free transfer to and from the bulletin board at higher speed than by using 9600 bps all the way through.

The compression effectiveness differs by the type of data. When sending text, the effective transfer speed may double. Speed will increase further if the text contains long sequences of similar characters.

Text is typically compressed by up to 63 percent. This means

that a 2400 bps modem using MNP-5 may obtain an effective speed of around the double when transferring such data.

File transfers using MNP

Files are often compressed and stored in libraries before transfer. Online services do this because compressed files take less space on their hard disks. Also, it is easier for users to keep track of files sent in a library file.

You rarely get speed advantages when transferring precompressed files using MNP or V.42bis. With some modems, you must turn MNP and V.42bis compression off before retrieval of compressed files.

Dumb or intelligent modem?

Some modems are operated with switches or buttons on a panel. They do not react to commands from your computer. We call them dumb.

You must dial numbers manually, and press a key on the modem, when you hear the tone from a remote modem. Only when the modem is connected to the remote modem, can you ask your communications program to take over.

We call those modems 'intelligent' that can react to commands from your computer. Most of them react to commands according to the Hayes standard.

Buy intelligent, Hayes-compatible modems - even when other standards may seem better. Most of today's communication programs are designed to be used by such modems.

Note: Buy modems that use the Hayes extended command set.

When a popular communications program, like Procomm and Crosstalk, tells the modem to "dial a number" or "go on hook," then the Hayes-compatible modem will do just that.

When you press ALT-H in Procomm, the modem will disconnect from the remote modem.

If you press ALT-D followed by the number "2," Procomm will locate the number to an online service in your telephone directory, and dial that number.

When the connection with the remote modem has been established, your modem will report back to you with a message like CONNECT 2400. This tells that a connection has been set up at 2400 bps.

If I select "k" from a menu provided by my communications program's command scripts, then my system will retrieve today's business news from Tokyo and put them up on my screen.

In the process, my system tells the modem to do several things, including "call a number," "speed 2400 bps," "redial if busy," "go on-hook when done." The only thing that I have to do, is press "k". The communications program and the modem will do the rest.

Automatic communication is impossible without an intelligent modem.

The Hayes standard

The U.S. company Hayes Microcomputer Products, Inc. pioneered command-driven modems. Their Smartmodem became a success, and "Hayes compatibility" a standard for intelligent modems.

Today, it is as unimportant to buy a Hayes modem to get access to Hayes commands, as to buy an IBM PC to run PC software.

Automatic dialing (autodial) was one of Smartmodem's important features. The modem could call a number and prepare for data communication, once a connection had been set up. If the line was

busy, it could wait a while and then redial. The operator could work with other things while waiting for the equipment to be ready for communication.

The modem had automatic answer (autoanswer), i.e., when someone called in, the modem could take the phone off hook and set up a connection with a remote modem. The modem enabled a connected PC to act as an electronic answering machine.

Hayes-compatible modems can report call progress to the local screen using short numeric codes or words like CONNECT, CONNECT 1200, CONNECT 2400, NO CARRIER, NO DIALTONE, BUSY, NO ANSWER, RING etc.

There can be small differences between such modems. The message DIALTONE on one modem may be DIAL TONE on another. Most of the main progress messages, however, are the same across brands.

The old Smartmodem had switches used to configure the modem. Most modern Hayes-compatible modems come without switches and have more commands than their ancestor.

Today's Hayes-compatible modems have a core of common commands, the "real" Hayes-commands, and several unstandardized additional commands. Here is an example:

A standard on the move

On the Quattro SB2422 modem, 2400 bps speed without automatic speed detection is set by the command "AT&I1." The equivalent command on Semafor's UniMod 4161 is "AT+C0".

Automatic detection of speed is a feature that lets the modem discover the speed of the remote modem to set its own speed at the same level. (Other modems may use different commands to set this.)

When I want Procomm to call a bulletin board, it first sends a sequence of Hayes commands to the Semafor modem. The purpose is to "configure" the modem before calling. It sends the following:

```
AT S0=0 +C0 S7=40 S9=4 &D2
```

The cryptic codes have the following meaning:

AT	"Attention modem. Commands following.."
S0=0	No automatic answer
+C0	No automatic speed detection (fixed speed)
S7=40	Wait 40 seconds for an answer tone from the remote modem.
S9=4	Wait 4/10 seconds for detection of carrier
&D2	Go on-hook if the DTR signal is being changed.

If this command is sent to the Quattro modem, it will reply with "ERROR". The code "+C0" must be replaced with an "&I1". The rest of the commands are the same. (Note: when a modem responds with "ERROR," it has usually rejected all commands sent to it!)

This setup is held in the modem's memory when Procomm sends its dialing command: ATDT4737031378. AT stands for ATtention, as above. DT stands for Dial Tone. Here, it is used to dial the number 4737031378 using tone signaling (rather than pulse dialing).

The modem cable

If you have an external modem, you must connect your computer to the modem with a cable. Some modems are sold without a cable.

This cable may be called a serial cable, a modem cable, a RS232C cable, or something else. Make sure that you buy the correct cable for your system.

Make sure that the connectors at each end of the cable are correct. If a male connector (with pins) is required in one end and a female (with holes) in the other, do not buy a cable with two male connectors.

Some connectors have 9 pins/holes, while others have 25 or 8-pin round plugs (Apple computers). Use a shielded cable to ensure minimal interference with radio and television reception.

At this point, some discover that there is no place on the PC to attach the cable. Look for a serial port at the rear of your machine, labeled MODEM, COMMUNICATIONS, SERIAL, or with a phone symbol.

If you find no suitable connector, you may have to install an asynchronous communication port in the box.

Connecting your equipment to earth

Secure your computer and modem against thunderstorms and other electrical problems. Securing the electric outlet in the wall is not enough. Problems can also enter through the telephone line.

Thunderstorms have sent electrical pulses through the telephone line destroying four modems, three PC-fax cards, one mother board, and at least one asynchronous communication port.

To prevent this from happening to you, disconnect electrical and telephone cables from your equipment during thunderstorms.

The communications program

A powerful communications program is half the job. In my case it's the whole job. Most of my work is done automatically.

The communications program will help you with the mechanical transportation of data in both directions. It lets you store incoming information for later use and reduces the risks of errors.

Here are some items to consider when shopping communications program:

* Seriously consider buying automatic programs ('robots') for access to individual online services, even if that means having to use several programs for different applications. (Read chapter 16 for more details.)

* Menus and help texts are important for novices, and in environments with "less motivated personnel." Advanced users may find it boring.

* Ability to transfer data without errors. The program should have transfer protocols like XMODEM, Kermit, XMODEM/CRC, YMODEM and ZMODEM. The XMODEM protocol is the most commonly used. You need these protocols if you want to transfer compiled computer programs (e.g., .COM and .EXE files). They are also used when transferring compressed files, graphics and music files.

* Does it let you tailor it to your taste/needs? Some programs let you attach batches of commands to function keys and keypress combinations. For example, by having your computer call your favorite online service by pressing the F1 key.

* Does it let you "scroll back" information having disappeared out of your screen? This may be useful when you want to respond while online to an electronic mail message. The sender's address and name, which you need to respond, have scrolled off the screen. If you cannot review the "lost" information, you may have to disconnect and call back later to send your mail.

Connecting to the online service

The first couple of times, most people think that it is very

difficult. Soon it becomes a simple routine.

On some computers, you just press a key, and that's it. On others, you have to call and press, and watch, while things are happening. Cheap is often a synonym for more work.

If you have a dumb modem connected to your personal computer, these are the typical steps that you must take:

(1) Start your communications program and set it up, e.g., with 2400 bps, 8 bits word length, 1 stop bit, no parity. (This is the most common setup.) Then set the program to "online."
(2) Call the number (e.g., +47 370 31378)
(3) When you hear the tone from the remote modem in the phone, press DATA to get the modems to connect to each other (i.e., to start to "handshake").
(4) A front panel indicator may tell you when the connection has been set up. You can start transferring data.

With an MS-DOS computer, an automatic modem and a powerful program preset for the job, the steps may be as follows:

(1) Start the program and display the telephone directory. Select a service from the list by pressing a number.
(2) The modem will call automatically to the service. When CONNECT has been established, your user identification and password are sent at the prompts for such information. When this is done, you are free to take control.

With an MS-DOS computer, TAPCIS, and an intelligent modem, you start by selecting forums and services to access on CompuServe. Enter 'o' to upload and download programs, or 'n' to have it fetch new message headers and messages.

TAPCIS will dial the number, do the job, and tell you when it's done. Meanwhile, you can go out to look at the moon, or sing a song.

Getting started with Procomm

Procomm is cheap and probably the most commonly used communications program for MS-DOS computers. It's been like this for many years, though there are many better and cheaper alternatives.

An older version of the program (version 2.4.2) is still being distributed through bulletin boards all over the world. You may give copies of this version to anyone. The requirement is that you pay a contribution of US$25 to the vendor if you like it and start to use it.

Procomm is simple for novices, can automate the work for advanced users and be run on almost any MS-DOS computer. Here is some of the features:

Press ALT-F10 for a pull-down window text listing features and commands. Press ALT+D to call a number, update the telephone directory, or select a script file for autologon to a service.

Procomm can emulate (pretend to be) different terminal types, like IBM 3101 and DEC VT-100/VT-52. Most services covered in this book may be well served with the setting ANSI.BBS.

It let you use both dumb and intelligent Hayes-compatible modems. If you have the latter, select numbers from the telephone directory for autologon. If the number is busy, Procomm can call back until you can get through.

You can define macros to automate your work. You can have one keystroke send your user identification, another for your password, and a third key to send a sequence of commands. Macros make your

communication faster and safer.

You can write script files to automate the online work further. You can transfer text files and binary files using automatic error detection/correction protocols, like XMODEM, YMODEM, Telink and Kermit, at speeds from 300 to 19200 bps. Adding external protocols like ZMODEM is relatively simple.

Appendix 3:

Online with the world

==========

- Practical data communication
- Your first trip online
- Typical pitfalls and simple solutions
- Receiving (downloading) letters, text and programs
- Sending (uploading) letters, text and programs

Practical data communication

The first thing novices want to know is how to set up the modem and computer for communication. This may take more time than expected and often seems complex for the uninitiated. You can save yourself much sweat and frustration by asking others for help.

To set up your equipment for communication is a one time job. Once done, you can almost forget what you did and why.

There are so many different modems, computers and programs out there. We just cannot give practical advice on the use of all of them in one short appendix. Instead, we will use one example. Your job is to "translate" the text into a terminology that fits your tools.

Once your system is set up for communication, your first job will be to find what keys to press to get the job done. How you use your communications program may vary considerably from our example. In general, however, it will be the same for most people doing manual communication. Once online, the environment is the same for all users.

If you plan to use automatic communications as explained in chapter 16, this chapter may not be that important. Your program will do the job for you. Still, take a few minutes and browse through the text. It may enable you to handle unexpected problems better.

Our example assumes that you have an MS-DOS computer. Not because this is the best microcomputer in the world, but because there are more of them than anything else. We assume that you have an external, intelligent Hayes-compatible modem and the communications program Procomm (version 2.4.2).

In this example, your modem is tested by calling my bulletin board at +47 370 31378. Not because this is the best board in the world, but because I have full control over how it looks and feels for those using it.

Assembling the equipment

You have the modem, the cable (to connect your modem with the computer), a phone cable (to connect your modem with the phone or the wall jack), and a communications program.

Check that the modem's power switch is off. Place the modem by the computer, and plug the power supply cord (or the power adapter cord) into the AC wall socket. Switch on the modem.

Do NOT use 115-volt equipment in 250-volt sockets!

Connect modem and computer using the modem cable. There may be

several optional sockets on the computer. These are usually marked RS-232, COMMS, MODEM, or just nothing. The connector may be of a flat 25-pins, 9 pins, or a round 8-pins type. Use communication port number 1, 2, or whatever else is available for this purpose.

If you have several options, and the socket for communication port number 1 seems free, use this. If not, try one of the others.

Next, connect the modem to the telephone line. If in luck, the modem came with a phone cable that works with your setup. If so, it is simple:

1. Disconnect the phone cable from the telephone. Insert the modular plug into the right jack on the modem. This jack is often marked with the word LINE, with a drawing of a modular wall jack, or another understandable icon.

2. You may be able to connect the phone to the modem using the phone cord that came with the modem. This may allow you to use the phone for voice, when the line is not busy with communication. (You may have to make changes in this cord to make it work with the connected phone.)

This concludes the technical assembly of your equipment. Next step is to install the communications program. When this is done, we will check it out.

Installing the program

Let us assume that you have received Procomm on a diskette, and that it is set up with its default configuration. PROCOMM.EXE is the program. The other files have no importance here.

Enter Procomm and press ENTER. Our first task is to prepare it for communication:

If you are using a monochrome display, use the command

```
PROCOMM /B
```

The program will greet you by a welcome text. At the bottom of the screen, the message "CREATING SYSTEM FILES" may appear (if these have not been created yet), followed by a message from the creators of the program.

Press ENTER when you have read the text. The screen will be blanked, and a text line will appear at the bottom.

Now is the time to test if the technical installation has been successful.

The dial tone

Lift the receiver from the phone and check if you can hear the dial tone. If you can, turn the pages to "Does the computer have contact with the modem?"

If you hear nothing, there are several possible causes:

* The phone is not working. This is easily checked. Disconnect it from the modem, and connect it to the wall (using the original cable!). If you get a dial tone now, then the phone is in order.

* The cable between the modem and the wall jack may be broken, or wrongly configured. To check this, we must first check the connection between the modem and the computer.

Once we know that the connection between the modem and the computer is in order, we can use the modem to check our phone cable.

* The cable between the modem and the phone may be in disorder. For example, the modular phone connector may have a cabling that differs from what is assumed in your country. If there is no dial tone, then the cable between the modem and the telephone must be

repaired, or replaced.

Does your computer have contact with the modem?

When you first use Procomm, it is preset for communication at 300 bps, use of port 1 and ANSI-BBS. (The control line at the bottom of your screen should read: ALT-F10 HELP, ANSI-BBS, HDX, 300 N81, LOG CLOSED, PRT OFF, CR and CR.)

* If your modem is unable to communicate at 300 bps, you must change the setup. Press ALT-P (keep the ALT key down while pressing P) to get the menu LINE SETTINGS. Choice 9 gives 2400 bps with 8 bits word length, no parity and one stop bit. This is a common setting. Select 24 "Save changes" to make the setting permanent.

* If you know that your modem is not connected to the computer's port number 1, then change this from the same menu. Choice 21 gives COM2, and choice 22 gives COM3.

If you don't know what communication port the modem has been connected to, you have to find out by testing. Do this by entering (i.e., sending to the modem) the characters AT. Now, the modem is supposed to respond with an OK (or with the number "0," if the modem is set to reply with numeric codes).

If you get an "OK" or a "0" on your display, continue reading from "Does the modem have contact with the phone line?"

If you can see "AT" on your screen while you enter it, you have contact with the modem. This is true even if it does not send any confirmation. The modem may have been instructed not to confirm. If you see the AT characters, read from "Does the modem have contact with the phone line?"

If there is no contact between the modem and the computer, the screen will remain blank at all times. Your problem may be the cable, your choice of modem port, or the modem setup.

First, check if the modem is switched on (the power switch), and that the plugs are firmly in the jacks.

Then let's check the modem. It may have been set not to respond to your commands. Let's try to change that. Enter the following command, and press ENTER:

```
ATQ0E1V1
```

This should make your modem: give result codes on your screen (Q0), show the characters that you enter (E1), and use OK instead of the numerical result code 0 (V1).

If you still get no OK, the reason may still be in the modem. I have seen modems get "indigestion problems" when too many commands are given to them.

Try give a command to return it to its factory setting. This command is not the same on all Hayes-compatible modems. On most of them, you can use one of the following: AT&F, ATF or ATZ (on some modems ATZ is used to reset to the stored configuration). Locate the correct command to use in the modem's user manual. Then, try ATQ0E1V1 again.

If you are still without success, check your choice of modem port. If there are several communication connectors at the back of your computer, test these. If this doesn't help, connect the modem cable to the most probable jack.

Now, test the communication port for a response from the modem using another communications program setting. Press ALT-P, select another port (choice 20 - 23), press ESC and try "AT" again (or ATQ0E1V1). If there is still no reaction, test the computer's other communications connectors.

If you have a mouse connected to your computers, make sure that it is not using the same port as your communications program.

Problems with the communications port are often caused by other equipment. Remove all extra equipment (like a PC-fax card or a mouse), and all associated software (often represented by a line starting with "DRIVER=" in CONFIG.SYS, or a resident program driving a mouse). Remove all resident programs from memory before testing.

If you are still at the same unfortunate stage, chances are that the problem is either in the cable or the modem. If you know others who are into data communication, visit them for help. Bring your cable and your modem to have them tested in an environment where things work. It is easier to isolate a problem by testing your units in sequence on your helper's system.

First, the cable. Connect it between his computer and his modem. Test the connection to his modem with your cable as the only foreign element. If the test is successful, your cable is OK.

Next, the modem. If the test is successful, your modem is in order. The most probable cause of your problems is your computer's communications port.

In communications, many parts have to work together. You may have problems with more than one of them at the same time. The rule is to test step by step to eliminate possible problems.

If you get no reply from your modem, when it is connected to your friend's computer, chances are that it needs to be repaired. Call the seller for help.

A last refuge is to buy an extra communications card for your computer . . .

Does your modem have contact with the phone line?

You have contact between your computer and modem. The modem answers "OK" as assumed. We now have to test if there is contact with the phone line. That is easy.

Enter the following command and press ENTER:

ATQ0E1V1

When the modem answers OK, enter the dialing command:

ATDT37031378

The modem will try to call 37031378, the number to my BBS. (You may have to prefix the number with an international code, and the country code for Norway. If international calls require the prefix 009, enter ATDT009-47-37031378).

Your modem will wait for CONNECT a preset number of seconds (rarely longer than 60 seconds).

If your modem does not detect the dial tone (within the preset waiting time), it will give you the following error message

NO DIALTONE

All other messages (except ERROR) declare that the modem did detect the dial tone. If it did, continue reading from "Configuring your program."

NO DIALTONE

The most probable causes of NO DIALTONE are that your phone cable is not connected, that it has been damaged, or that it is the wrong cable for the job.

The latter cause is common in many countries. For example, a cable made for a telephone network in the United States, may not work in Norway. A cable made for connection to a switchboard, may not work when connected to a domestic phone line.

A standard, domestic American phone cable contains four lines. Two of these (line number 1 and 4) carry sounds. The others are not being used. A standard Norwegian domestic cable is set up in the same way, but here line number 1 and 3 carry sound.

Changing the configuration of such cables is often simple. Just cut the cable in two, and put the lines together correctly. This is typically required when your modem assumes that you use it in North America, while you are in a country with different cabling.

Configuring your program

The modem answers. The dial tone is being detected. Procomm is installed on your hard disk. Now, check if the program has been correctly configured.

Press ALT-S to get the Setup Menu. Select 1, Modem setup, from this menu.

Choice 1, Modem init string, is a general setup command. This command will be sent to the modem each time you start Procomm. You are free to make is as long and powerful as you want. Our purpose now, however, is to check if it works.

> Most modems do not react if one element in your setup command is wrong. They respond with ERROR (or the numeric code), and disregard the rest.

Procomm's standard Modem init string has the following commands:

```
ATE0 S7=60 S11=55 V1 X1 S0=0!
```

These work well with most modems, provided the speed is legal.

Go back to the blank screen (using ESC). Test the init command by entering it manually. (Do not enter the "!" character. This is Procomm's code for ENTER.)

If the modem reacts with ERROR, check with the modem manual to find out what is wrong. (Check if the values S7=60 and S11=55 are not too high.)

If you have to change the init command, go back to the Modem init string menu choice. Enter the correct commands. Remember to add the "!" at the end.

Press ESC to get to the main configuration menu and select 2, TERMINAL SETUP. Check if Terminal emulation is ANSI-BBS. Change choice 2, Duplex, to FULL. The other factory settings are NONE, CR, CR, DEST, BS, OFF, ON, 350, OFF.

Return to the SETUP MENU (press ESC). Press "s" to save the setup to disk. Your setting has now been stored, and Procomm is ready to be used.

Dialing

Now, test your setup by calling your favorite online service. We will show how to log on to my bulletin board.

You can call manually by entering ATDT followed by the phone number. The most practical method, however, is to use the built-in phone directory.

Press ALT-D to get to the phone directory. Press "R" to revise the list, and enter Saltrod Horror Show somewhere on the list. I have it as number 2. Answer the questions like this:

```
Name: Saltrod Horror Show
Number: 009-47-370-31378
Baud: 9600
Parity: N
Databits: 8
Stop Bits: 1
Echo On? N
Command file: (press ENTER, meaning that you don't want to
               use a script file at this point)
```

Baud can be anything from 300 bps to 9600 bps. It's up to you, and depends on your modem's capabilities.

When done, enter "2" and press ENTER. The modem will dial the number (that you have as item 2 on the list), and try to connect.

If the number is busy, you will get a warning. You can now leave Procomm (ALT+X), or set it for redialing (ALT+R). When set for redialing, Procomm will call back until a connection has been made. When CONNECT is received from your modem, Procomm announces the fact with a beep in the computer's loudspeaker.

Text will start scrolling over your screen. First, a short welcome text pops up. Your interactive dialog with the bulletin board can start.

The first question is "What is your First Name?" Enter your first name. Then, "What is your Last Name?" Enter your last name.

Your dialog with the remote computer will continue like this. The board will ask you questions, and you will enter your answers.

What may go wrong?

A setting that works beautifully when calling one bulletin board, may be a disaster when calling another service. Here are some typical problems:

When dialing through a switchboard (PBX).

Remember to add 9 or 0 for a city line, when dialing out from a PBX. If you forget, you'll get nowhere.

Use the following command (assuming that you must enter 0 to get a city line, and use tone signaling):

```
ATDT0W4737031378
```

If you must use 9 for a city line and pulse dialing, use the following command

```
ATDP9W4737031378
```

Register your standard dialing command in Procomm's MODEM SETUP. Enter ALT+S and then select 1, Modem Setup. Choice 2, Dialing command. The default entry is ATDT. Replace this with ATDT0W, ATDP9W or whatever makes dialing work for you.

No answer from the remote computer

Your computer has to "talk the same language" as the remote host. If the parameters of your communications program have been set incorrectly, it may be impossible to set up a connection with the service.

Sometimes, you get CONNECT, but your screen only gives you strange, unintelligible 'noise' characters. The reason may be CONNECT at an incompatible speed, a service's use of special codes for displaying text (including special language characters), or that the service requires use of a special communications program or method (as when a service starts by interrogating for the use of an offline reader).

Many online services require that you use certain settings. Most services, however, may be reached when using the following:

Speed: 2400 bps
8 bits word length, no parity, one stop bit

Some services (notably some Unix hosts) demand 7 bits, even parity, one stop bit.

Sorry, no luck!

Try again, just in case. The remote computer may have had a temporary problem, when you called. The PTT may have given you a particularly noisy telephone line on this attempt.

If this doesn't help, recheck each point in the communications process. It is so easy to do something wrong.

If nothing helps, read the service's user information manuals. Only rarely will you be able to blame the communications program (unless you have made it yourself), or the equipment. Most errors are caused by finger trouble and misunderstandings.

Testing the Saltrod Horror Show

First time visitors often experience problems, and in particular if this is their first time online using a Hayes-compatible modem.

Here are some typical problems with suggested solutions:

* Disable Guard Tones from the modem when dialing. If it has this feature, you can often turn it off. Put the required command in your Modem init string.
* Don't press ENTER to "wake" my system. The software will automatically detect your speed and adjust accordingly. The same applies for many services. On some, you're just asking for problems by not waiting patiently (often the case when the remote software starts by checking if you use an offline reader).
* My BBS accepts from 300 to 9600 bps asynchronous, full duplex communication. You may not succeed with 1200 bps half duplex, Bell 300 bps or 1200 bps.
* Start with your communications program set for 8 bits word length, no parity and one stop bit. Try 7 bits, even parity if there is too much noise on the line (you cannot retrieve programs using this setting, though).
* When your modem is set at a low transfer speed, it may not wait long enough for carrier from my modem. Most modems let you set this waiting time longer by giving a value to a S-register. (Read in your modem's manual about how to do this).

Partial success

Some bulletin boards offer colors and music. If your equipment is set up correctly, you can receive the welcome text in full color graphics accompanied by a melody in your computer's speaker.

If it is not, chances are that you will get many strange codes on your screen, and an ugly feeling that something is wrong.

There are two ways out of this problem:

1. Ask the bulletin board to send text only (select U for Utilities, and then G for Graphics to change setting),

2. Set your computer for colors and graphics. This feature is only available for callers with an MS-DOS computers. You may need to add the line DEVICE=ANSI.SYS in your CONFIG.SYS.

Finally, you must have a communications program that allows you to display colors on your screen. Procomm set with ANSI-BBS does that.

Downloading programs

We call the transfer of programs and files from a remote computer for downloading. It means "transfer of data to your computer AND storage of the data (down) on YOUR local disk."

You are downloading, when you call my board to retrieve a program.

When you, overwhelmed by gratitude, send one of your favorite programs TO my bulletin board, then we call it uploading.

Data can be many things. It may be news from Washington Post, a digital picture, an executable program, a pile of invoices, a piece of music, a voice file, an animated sequence of pictures and music, or compressed library files.

Downloading "plain text" (also called "plain ASCII" or "DOS text" on MS-DOS machines) is relatively easy. Such text usually only contains characters between number 32 (space character) and 126 (the ~ character) in the ASCII table.

Characters with lower numbers have special functions (like the control characters ESCape and CTRL+C). These may not even be displayed on your screen. Characters with higher numbers are used for graphics, special national characters, and other applications.

Special transfer methods are often required, when your data contains text with characters outside ASCII number 32 through 126. Read under "Protocol transfers" below for more information about how to do this.

Downloading text

Most communication programs require that you begin by opening a file. They ask you to enter a file name. From this point and onwards all incoming text will be stored in this file until you say stop.

Communication programs do this in different ways. Some let incoming data flow through a temporary storage area using the principle first in, first out. When you open a file, it starts storing data from the beginning of the temporary storage area, though this text may have scrolled off your screen some time ago.

Most communication programs start storing data from NOW. Procomm works this way. You start downloading of text by pressing the PgDn key. A window will appear on your screen giving you a choice between various methods. Select ASCII.

In another window, you are asked to enter a file name. When done, storage of incoming data starts. You stop the process by pressing the ESC key.

Procomm has another method called "file logging." You start this by pressing ALT-F1. Procomm requests the file name, and the

storage process starts. (Read under "Strip" about the difference between these methods.)

    If you forget to tell Procomm to store incoming data, then you will most probably lose this data for ever.

    Do not waste time and money by forgetting to store what you receive!

The term "append"

When downloading text - or anything - it is important to know whether you are appending information to an existing file, or overwriting it (i.e., destroying the old text).

Most communication programs complain with an audible signal, when you try to overwrite an existing file. They will ask you if you really want to delete it, or append the current data.

The term "strip"

The purpose of 'strip' is to remove something from incoming data or to change it on the fly.

When you use ASCII downloading with Procomm, ALL incoming data are being stored. This includes so-called ESCape sequences. If you use File Logging, all control characters (except the line feed and new page characters) are being removed (filtered).

If you download text from a computer that uses other ASCII characters for linefeed and return, save time by having the communications program convert them on the fly to their correct form for your computer.

You define strip procedures through Procomm's SetUp menu (ALT-S). You can also request automatic conversion of characters to graphics values, or local language variants.

National characters

Special national characters cause problems in many countries. One reason is that they are represented by different internal codes on various hardware platforms, and that some networks are unable to transmit 8-bits data.

Some systems represent these special characters by a 7-bit code, others by an 8-bit code. Some depend on the computer having an internal national language ROM, or that it uses a special (resident) conversion program.

What gives good results on an MS-DOS computer, may give rubbish on a Macintosh, Amiga, Atari, or a PC using MS Windows.

Many communication programs have features that can help you solve at least some these problems. They let you make translation tables for automatic conversion of special incoming and outgoing characters.

If you call a Scandinavian online service using 7 bits even parity, many transfer the national special characters using the ASCII code equivalents of number 91, 92, 93, 123, 124, and 125. Similar, more or less formal standards are in place in other countries.

Protocol transfers

If your purpose is to transfer digitized pictures, a computer program, a batch of invoices, a piece of music or an animated sequence of pictures, it's important that each character (bit)

arrives correctly. We achieve this by using protocol transfers.

These files often contain control or binary characters. You cannot transfer binary files without the use of special methods.

It is easy to understand why we need protocol transfers when retrieving plain text as tables of numbers, statistics, and financial reports. Transfer errors may have fatal consequences.

Protocol transfers are also required when transferring word processor text files having imbedded control codes (like text made with WordPerfect), and compressed files.

Here is an example:

Downloading public domain software

First, you need the names and features of the programs that can be downloaded from a service. On most bulletin boards, you must enter a command to navigate to the File Library. Here, they normally greet you with a menu listing available commands.

Try H (for Help!) or ? when you are stuck.

Public domain and shareware programs are stored in subdirectories on my bulletin board. The directories have numerical names. Utility programs for MS-DOS computers are stored in directory 10. Games are stored in directory 17.

Enter L for a list of available directories (other bulletin boards may use different commands). Enter "L 17" to list the files in directory 17. This will give file names, lengths in characters (to help you estimate download time), creation dates, and a short description of each file.

You can search for files of interest. When looking for programs that can help you get more out of a printer, you may search using keywords like "printer."

Some programs are made available in text form. This is the case with older BASIC programs. (The file name extensions .BAS, .ASC or .TXT suggest that the files contain plain text.) You can download these files using ASCII.

Most programs are stored in their executable form, or as one executable file among several in a compressed transfer file (a library of files). On my board, most of these files have the file name extension .EXE or .COM.

What transfer protocol to use, depends on what is available in your communications program.

The protocol transfer method explained

The protocol transfer algorithms use methods to check the transfer with automatic error correction. In principle, they work like this:

The sending program calculates a check sum based on the contents of the file. The receiving program does the same calculation and compares the result with the senders' check sum. If the figures match, the transfer was successful. If not, all or part of the file will be retransmitted.

These are some popular protocols:

XMODEM

has automatic error detection and correction. Most modern programs have this feature. XMODEM exists in programs for MS-DOS computers, CP/M computers, Apple, TRS-80 Model 100, etc. It is the most commonly used transfer protocol.

XMODEM assumes 8-bit settings in your communications program.

The file to be sent is split up into 128 bit sized blocks (or "packets") before transfer. The sender calculates the check sum and adds a check sum bit at the end of each packet. (Packing, sending and checking is done automatically by the software.)

The receiving program calculates its own check sum and compares with the sender's. If an error is detected, XMODEM will request retransmission of the last block.

XMODEM is reasonably good when there is little noise on the telephone line is low. When the line is bad, however, there is always a chance that the transfer will stop. You cannot use XMODEM on computer networks that use ASCII flow control or ESCape codes.

The transfer commands must be given to both computers. You can only transfer one file per command.

XMODEM's "packet size" (block length) is short. This has an impact on transfer speed, and especially when downloading from timesharing systems, packet switched networks, via satellites, and when using buffered (error correcting) modems.

The control method (8-bit check sum) and unprotected transactions give a low level of safety against errors in the transmission. The transferred file may contain 127 bytes with noise characters (at the end). The creation date of the file is lost in the transfer.

These weaknesses have given us better methods. Here are some of them:

XMODEM/CRC

CRC is an abbreviation for Cyclical Redundancy Check. The method guarantees 99.9969 percent free transfer. It still has the other weaknesses of ordinary XMODEM transfers.

YMODEM Batch
---
is faster than XMODEM and gives a high level of safety in the transfers. When used with some programs, YMODEM can transfer the files' creation time/date. You can transfer updated documents. This will replace documents with an older creation date. Only one party must enter the file name. YMODEM takes care of the rest.

Kermit
---
is used on many computer platforms, and especially where they use a terminal emulation mode (like VT-100) which makes the use of XMODEM impossible. Kermit is one of the few asynchronous error correction protocols that functions well when exchanging files having half duplex IBM front-end machines.

Kermit can transfer more than one file at the time.

Super-Kermit
---
is also called Kermit with Sliding Windows. It can transfer many packets before stopping to check the transfer. The protocol is much faster than XMODEM.

ZMODEM
---
is currently the fastest transfer protocol for many applications. All transactions are protected with a 16-bit or 32-bit CRC. ZMODEM is immune against most error conditions that prevent traditional protocols to achieve correct transfer.

ZMODEM transfers the creation date of the file and its exact

contents. The file name is read once, and all transfer commands may be given by the sending program.

Decompression of files

If a file has name extensions like ZIP, LZH, ARC, PAK, LQR, LBR, ZOO, ARJ, or QQQ, you are facing a compressed file. We use such files to achieve faster transfers.

Files having the extension .EXE or .COM may be compressed files that have been converted into a self-extract format. To retrieve the files from a self-extract compressed file, just enter the file's name.

To decompress files that have not been made self-extract, you need a utility program. These programs have many names and are available through most bulletin boards.

Transfer problems

Most transfer problems are caused by the communication programs and their (lack of) features.

Some Procomm users have problems with the Kermit protocol. Tip: use 8 bit world length and no parity in your program setup. 7 bits and even parity does not always work (on version 2.4.2).

Uploading

The transfer of data "the other way," i.e., from your disk to a remote computer, requires that you start by making some decisions. Is the file to be sent as plain ASCII? Should I compress it in a distribution file to reduce transfer time, and make it easier to handle for the recipient?

If you are transferring a text file containing special national characters, then these may have to be converted to another format.

If your text contains blank lines (like blank lines between paragraphs), you may have to insert a space character at the start of all such lines. Some systems interpret a blank line as a signal telling that transmission is done. The invisible space character prevents this.

Some hosts have limitations on line length. They may require that lines be shorter than 80 characters. If you send lines that are too long, the result may be fatal.

Sending electronic mail

If you send your mail too fast, some online services tend to get digestion problems. You must be very accurate with the format of your message. It has to agree with the host machine's rules about line length, and maximum number of lines per message.

Let's assume that you want to send the following message to an electronic mailbox:

```
To: Datatid
cc: Anne-Tove Vestfossen
Sj: Merry Christmas!
Text: Thanks for the box with herring. The taste was
formidable. etc .. etc... etc...
Greetings, Odd
```

If this is all you have to say, doing it manually may be as fast as doing it automatically. However, if the line containing "etc .. etc .." is two full pages of text, you may feel differently. Then, the

best may be to upload a prewritten letter.

Many Procomm users prefer to split the job in two. They enter the first four lines manually, and upload the body of the text (when the remote computer is ready to receive).

Press PgUp to get a menu of various uploading protocols. Select ASCII for transfer of plain text. Procomm will ask for the name of the file, which contains your letter. Enter the name, and the file will be sent.

Slow down with "pacing"

Sometimes, the PgUp method is just what you need. On other days, strange things may stop you in the middle of your transfer. One typical reason is that Procomm is sending it too fast for the recipient.

"Pacing" is a method used to slow the speed of the transfer to a level that the recipient can handle.

Procomm lets you set a tiny pause after each line sent. Another technique is to ask the program to wait for a given character (a "Go-character"), before allowing it to send the next line. For example: the character ":" is often used in the prompts for the next line on bulletin boards.

Protocol transfers may be easier

You may find it easier to use a transfer protocol. With Procomm, press the PgUp key, and the program will ask for a protocol. Select Kermit or something else. The program will ask for a file name, you enter it, and off it goes. You will have no problems with blank lines, or lines that are too long.

At times, even this will fail. The most common reasons are:

* The recipient requires that Procomm be set for 8-bits word length, no parity, 1 stop bit, when using this protocol, but you have it set differently.

* You think that the recipient's version of YMODEM is the same that you have. Wrong! Total failure.

Do the following to upload the file TEST.TXT to my bulletin board using XMODEM:

1. Navigate to the file area. Tell SHS what you want by using the following command:
   u;test.txt;x
2. Press PgUp, select XMODEM, enter a file name (TEST.TXT), and the transfer will start. (If you're too slow, SHS may be tired of waiting for your commands . . .)
3. When the transfer is completed, my board will ask for a short description of the file. Enter it, and you're done.

Enter G (for Goodbye), and disconnect.

Appendix 4:

Explanation of some frequently used terms

==========

We have included some terms that are commonly used in the online world. For more information, get a copy of "FYI: Internet User's Glossary." To get this file, send email to SERVICE@NIC.DDN.MIL with the following command in the Subject of your mail: RFC 1392 .

Address

The string of characters that you must give an electronic mail program to direct a message to a particular person.

The term "Internet address" often refers to an assigned number, which identifies a host on this network.

Anonymous FTP

The procedure of connecting to a remote computer, as an anonymous or guest user, to transfer files back to your computer. See FTP for more information.

ANON-FTP

See Anonymous FTP.

ANSI

(1) ANSI is an organization that sets standards.
(2) 'ANSI graphics' (ref. the term ANSI-BBS) is a set of cursor control codes that originated on the VT100 terminal. Many online services use these codes to help improve the sending of characters to communication programs. It uses the escape character, followed by other characters, to move the cursor on the screen, change color, and more.

Archie

An electronic directory service for locating information throughout the Internet. You can use Archie to locate files on anonymous ftp archive sites, other online directories and resource listings. It is useful for finding free software.

Archie offers access to the "whatis" description database. This database contains descriptions that include the name and a brief synopsis of the large number of public domain software, datasets and informational documents located on the Internet.

This book emphasizes email access to Archie. You can also reach archie servers by telnet to one of the following addresses:

archie.au	139.130.4.6	(Australian server)
archie.mcgill.ca	132.206.44.21	(Canada)
archie.funet.fi	128.214.6.100	(Finland/Europe s.)
archie.th-darmstadt	130.83.128.111	(Germany)
archie.cs.huji.ac.il	132.65.6.15	(Israel server)
archie.kuis.kyoto-u.ac.jp	130.54.20.1	(Japan)
archie.sogang.ac.kr	163.239.1.11	(Korea)
archie.nz	130.195.9.4	(New Zealand)
archie.ncu.edu.tw	140.115.19.24	(Taiwan)
archie.doc.ic.ac.uk	146.169.11.3	(UK/England server)
archie.rutgers.edu	128.6.18.15	(U.S.A.)

Archie server

An email-based file transfer facility offered by some systems connected to the Internet.

ASCII

The American Standard Code for Information Interchange. A standard seven-bit code created to achieve compatibility between various types of data processing equipment. ASCII, pronounced "ask-key," is the common code for microcomputer equipment.

The Standard ASCII Character Set consists of 128 decimal numbers ranging from zero through 127 assigned to letters, numbers, punctuation marks, and the most common special characters.

The Extended ASCII Character Set also consists of 128 decimal numbers and ranges from 128 through 255 representing additional special, mathematical, graphic, and foreign characters.

ASCII download

Retrieval of plain ASCII text (without special codes). Normally, it takes place without automatic error correction, but it is typically managed by XON/XOFF flow control.

Asynchronous transfer

Serial communication between two computers. When signals are sent to a computer at irregular intervals, they are described as asynchronous. Data is sent at irregular intervals by preceding each character with a start bit and following it with a stop bit.

Asynchronous transmission allows a character to be sent at random after the preceding character has been sent, without regard to any timing device. Consequently, in case of line noise, the modem can find out right away where the next byte should start.

Autodial

When a modem dials a telephone number automatically. Autodial may be started by the user entering the number manually, or the number may be sent automatically by the communications program (for example after having been selected from a phone register).

Baud

A unit of measurement that shows the number of discrete signal elements, such as bits, that can be sent per second.

Bits per second (bps) is the number of binary digits sent in one second. There is a difference between bps and baud rate, and the two are often confused. For example, a device such as a modem said to send at 2400 baud is not correct. It actually sends 2400 bits per second.

Both baud rate and bps refer to the rate at which the bits within a single frame are sent. The gaps between the frames can be of variable length. Accordingly, neither baud rate nor bps refer accurately to the rate at which information is actually being transferred.

BBS

Bulletin Board or Bulletin Board System. See Bulletin Board.

Bell

Standard frequencies used in older modems made in the United States. The standard for 300 bps is called Bell 103. The standard

for 1200 bps full duplex is called Bell 212A. Modems using these standards are normally unable to communicate with CCITT standard modems at these speeds.

Big5

Coding scheme developed in Taiwan for using Chinese on computers. There are different varieties of Big5 codes, the most common being ET Big5 (the code used by the Taiwanese program ETen, pronounced Yi3tian1) and HKU Big5 (the code used for programs developed at Hong Kong University).

ET Big5 files must be read with the ETen operating system.

Binary

The base 2 number system in which only the digits 1 and 0 are used is called the binary system. The binary system lets us express any number, if we have enough bits, as a combination of 1's and 0's. Also used to express conditions like on/off, true/false, yes/no.

Bits

Bit is an abbreviation for Binary digIT. Computer words and data are made-up of bits, the smallest unit of information.

A bit can be either zero or one, represented in a circuit by an off or on state, respectively. The bits are set on or off to store data, or to form a code that in turn sends instructions to the computer's central processing unit.

Bits per second (bps)

Bits per second (bps) is the number of binary digits sent in one second. It refers to the rate at which the bits within a single frame are sent ('frame' is another term for 'packet'). The gaps between frames can be of variable length. Accordingly, bps does not refer to the rate at which information is actually being transferred.

We usually estimate the amount of characters transferred per second (cps) by dividing the number of bps by 10. Example: 2400 bps transfers around 240 characters per second.

Boolean

Search algorithm built on the algebraic theories of the English mathematician George Booles. Boolean algorithms are used in online databases to help narrow down the number of hits using the words AND, OR, and NOT.

Bounce

The return of a piece of mail because of an error in its delivery.

Bps

Abbreviation for bits per second. See above.

Browse

To view and possibly edit a file of data on screen similar to handling text in a word processing document.

Bulletin board

A computer, often a microcomputer, set up to receive calls and work as an online service. The BBSes let users communicate with each other through message bases, and exchange files. They and may also offer other services (like news, data base searches, and online shopping).

Carrier

The tone that the modem sends over a phone line before any data is sent on it. This tone has a fixed frequency and a fixed amplitude. It is then modified to indicate data.

Character

Here used about a letter, a number or another typographical symbol or code.

CCITT

The Consultative Committee for International Telephony and Telegraphy. An international consultative committee, organized by the United Nations. Membership includes Telephone, governmental Post, and Telegraph Authorities, scientific and trade associations, and private companies. CCITT is part of the International Telecommunications Union, a United Nations treaty organization based in Geneva, Switzerland.

CCITT sets international communications recommendations. These are often adopted as standards. It also develops interface, modem, and data network recommendations. The X.25 protocol for access to packet-switched networks was originally a recommendation of CCITT.

A wide range of CCITT documents is available through The Teledoc database of The International Telecommunication Union (ITU):

* CCITT and CCIR administrative documents
* lists of contributions (substantive input/proposals) to CCITT and CCIR study groups
* lists of CCITT reports and Recommendations (i.e., standards)
* summaries of CCITT new or revised Recommendations
* CCITT and CCIR meeting schedules and other information concerning Study Groups structures and activities.

For information, write to shaw@itu.arcom.ch or bautista@itu.arcom.ch
The database is at teledoc@itu.arcom.ch .

COM port

A COM port (or communication port) is a communications channel or pathway over which data is transferred between remote computing devices.

MS-DOS computers may have as many as four COM ports, COM1, COM2, COM3, and COM4. These are serial ports most often used with a modem to set up a communications channel over telephone lines. They can also be used to send data to a serial printer, or to connect a serial mouse.

Conference

Also called SIG (Special Interest Group), Forum, RoundTable, Echo. A conference is an area on a bulletin board or online service set up as a mini board. Most conferences have separate message bases and often also file libraries and bulletins. Conferences are focused on topics, like politics, games, multimedia and product support.

Connect time

A term used for the hours, minutes, and seconds that a user is connected to an online service. On several commercial services, users have to pay for connect time.

CPS

Characters per second. See Bits per second.

Data

Information of any kind, including binary, decimal or hexadecimal numbers, integer numbers, text strings, etc.

Database

A database is a highly structured file (or set of files) that tries to provide all the information assigned to a particular subject and to allow programs to access only items they need.

Online services offer databases that users can search to find full-text or bibliographic references to desired topics.

DCE/DTE

Data Communications Equipment/Data Terminal Equipment. Equipment connected to an RS232 connector must be either a DCE (like a modem or a printer) or a DTE (computer or terminal). The term defines the types of equipment that will "talk" and "listen."

Default

When a value, parameter, attribute, or option is assigned by a communications program, modem, or online system unless something else is specified, it is called the default.

For example, communication programs often have prespecified values for baud rate, bit size and parity that are used unless alternative values are given. These prespecified values are called the defaults.

Some services give users a choice between two or more options. If a selection is not made by the user, then a selection is automatically assigned, by default.

Discussion list

See Mailing list.

Domain Name System (DNS)

Email addressing system used in networks such as Internet and BITNET. The Internet DNS consists of a hierarchical sequence of names, from the most specific to the most general (left to right), separated by dots, for example nic.ddn.mil.

Doors

A service offered by many bulletin boards to allow the user to leave the (remote) main software system to use one or several independent programs, like games and databases.

Downloading

The transfer of data from an online service and "down" to your computers' disk.

DTR

Data Terminal Ready is a circuit which, when ON, tells the modem that your computer is ready to communicate. Most modems are unable to tell your computer that a connection has been set up with a remote computer before this circuit has been switched off. If your computer turns this signal OFF, while it is in a dialog with a remote computer, the modem will normally disconnect.

Duplex

Describes how you see text entered by the keyboard. When the setting is HALF DUPLEX, all characters entered on your computer for transfer to an online service (or your modem) will be displayed. In addition, you will normally receive an echo from the online service (or modem). The result will often 'bbee lliikkee tthhiiss'.

When using the setting FULL DUPLEX, typed characters will not be shown. What you see, are characters echoed back to you from the online service and/or your modem.

ECHO

(1) When data is being sent, the receiving device often resends the information back so the sending device can be sure it was received correctly.
(2) Term used on FidoNet for this network's system of exchanging conferences (parallel conferencing).

Email

Abbreviation for Electronic Mail.

FAQ

"Frequently Asked Questions" about services on the Internet. A list of FAQ documents is posted every four to six weeks to the Usenet newsgroup news.announce.newusers.

File server

A file server is a device that "serves" files to everyone on a network. It allows everyone on the network to get files in a single place, on one computer. Typically, it is a combination computer, data management software, and large capacity hard disk drive.

File transfer

The copying of a file from one computer to another over a computer network.

Finger

A program on computers directly connected to the Internet that returns information about a registered user on a system. Finger is useful before initiating chats, known on the Internet as "talk."

Flame

A "flame" is a conference message sent by someone who generally disagrees so violently that they are willing to sink to personal attacks. Flames can be extremely annoying, and can get the writer banished from several conference networks.

Fractal

A mathematical algorithm from which an image can be created. A fractal formula generates a fractal picture composed of an image based on a basic pattern. An outgrowth of chaos mathematics, it is being used for compressing and decompressing high quality images. Generally, a fractally compressed image has an extremely small file size.

FTP (File Transfer Protocol)

A program on the Internet for sending and receiving files to and from a remote computer to your local host. FTP lets you connect to many remote computers, as an anonymous or guest user, to transfer files back to your computer.

FTP only lets you list file directories on foreign systems, and get or retrieve files. You cannot browse menus, send email, or search databases.

Usually, type ftp at your system prompt, login on the remote system, and ask for the file you want to receive. It transfers to your local host machine. (For more on this, read under "Internet" in appendix 1.)

Unless your computer is directly connected to the Internet, the retrieved software will have to be transferred from your local host machine to your PC.

Where ftp is not available, you may use FTPMAIL (see chapter 12.

Full duplex

The term full-duplex means the transmission of data in two directions simultaneously as from a terminal to a computer or from the computer to the terminal. Full-duplex is simultaneous two-way communication.

Full-text database

A database containing the full text of an article, a chapter in a book, or a book. The contents are not limited to abstracted information (indexes, bibliographic information).

FYI

"For Your Information." On the Internet, a subseries of RFCs that are not technical standards or descriptions of protocols.

Gateway

Here, we use the term gateway about an interconnection between two (or more) online services, set up to allow a user of one service to use the other service's offerings through the first service's user interface.

The term also has other meanings:

A gateway provides an interconnection between two networks with different communications protocols. Gateways operate at the 4th through 7th layer of the OSI model. For example, a PAD (a packet assembler/disassembler) is a device used to interface non-X.25 devices to an X.25 network. The PAD serves as a gateway. Protocol converters are gateways between networks.

The gateway, provided by an adapter card in a workstation, enables the network to perform as if it were a mainframe terminal connected directly to the mainframe.

Gopher

A world wide information service with many implementations. It works from a top-level subject-oriented menu system that accesses other information services across the Internet. Gopher combines a finding and fetching capability in one tool.

Gopher gets information from certain locations on the Internet to which it is connected, and brings the information to your computer. It can also get information via other Gophers at other locations connected to yet other hosts. The Telneting or file transfer protocols are transparent to the user.

"Common Questions and Answers about the Internet Gopher" are posted to the following Usenet newsgroups comp.infosystems.gopher, comp.answers, and news.answers every two weeks.

The most recent version of this FAQ is also available by anonymous ftp from rtfm.mit.edu in the /pub/usenet/news.answers directory. The file is called gopher.faq.

To get it by email, write mail-server@rtfm.mit.edu with the command "send usenet/news.answers/finding-sources" in the body of the text.

GuoBiao

Coding scheme for using Chinese on computers developed in mainland China. For more information, send email to LISTSERV@UGA.BITNET with one of the following commands in the text of your mail:

```
GET PC HELP                  (for PC users)
GET MAC HELP                 (Macintosh users)
GET CXTERM HELP              (X Windows users)
```

Half duplex

The term half-duplex means the transmission of data in either direction but only one direction at a time.

Ham

Amateur radio.

Handle

An alias used on a bulletin board or online service instead of your real name. Often used in chats.

Header

------
(1) In an email message, the part that precedes the body of a message and contains, among other things, the message originator, date and time.
(2) On a packet switched network, the portion of a package, preceding the actual data, containing source and destination addresses, and error checking and other fields.

Host

A term for host computer, remote computer or online service. Here, we use it about a timesharing computer, a BBS system, or a central computer that controls a network and delivers online services.

Hytelnet
----
(1) An Internet service offering access to many other services, including university and library catalogues around the world. Prefers VT-100 emulation. (telnet herald.usask.ca. Login: hytelnet)
    The Hytelnet anonymous ftp archive is at ftp.usask.ca. Get the README file in the /pub/hytelnet directory.

(2) A memory resident utility (MS-DOS) that provides instant information on Internet-accessible library catalogues, Free-Nets, Campus Wide Information Servers, Gophers, WAIS, and much more.
   The program is available by ftp from access.usask.ca in the /pub/hytelnet/pc/ directory. File name is hytelnxx.zip where xx is the number of the latest version.
   HYTEL-L@KENTVM.BITNET is a mailing list for announcements of new versions.

Information utility

A term often used about online services (not unlike the term power utility).

Internet

See appendix 1.

Internet number

See IP Address

IP (Internet Protocol)

The Internet standard protocol that provides a common layer over dissimilar networks, used to move packets between host computers and through gateways if necessary.
   For more information, send a message to service@nic.ddn.mil with the following text in the subject title: RFC 791 .

IP Address

Every machine on the Internet has a unique address, called its Internet number or IP address. Usually, this address is represented by four numbers joined by periods ('.'), like 129.133.10.10.
    The first two or three pieces represent the network that the system is on, called its subnet. For example, all of the computers for Wesleyan University in the U.S.A. are in the subnet 129.133, while the number in the previous paragraph represents a full

address to one of the university's computers.

IRC

Internet Relay Chat is a worldwide "party line" protocol that allows one to converse with others in real time.

ISDN

An emerging technology being offered by many telephone carriers of the world. ISDN combines voice and digital network services in a single medium, making it possible to offer customers digital data services as well as voice connections through a single "wire." The standards that define ISDN are specified by CCITT.

ISO

The International Organization for Standardization. A voluntary, nontreaty organization responsible for creating international standards in many areas, including computers and communications. Its members are the national standards organizations of the 89 member countries, including ANSI for the U.S.

ISO is coordinator of the main Internet networking standards that are in use today.

ISO@NIC.DDN.MIL is a mailing list focusing on the ISO protocol stack.

JIS

A Japanese industry standard code for presenting the Japanese character set Kanji on computers. JIS defines special ranges of user-defined characters. Only the most popular ones are included.

The newer Shift JIS standard sets aside certain character codes to signal the start of a two-character sequence. Together, these define a single Kanji metacharacter.

There are many oddities to be found in handling Kanji over the network. Sending JIS-encoded messages through the Internet is done using a 7-bit code (standardized on JUNET). Unfortunately, it incorporates the ESC character, which some systems will filter out. (This problem can be overcome by using UUENCODing.)

Some services, like APICNET in Tokyo, converts outgoing Kanji messages automatically to 7-bit format.

JVArcServ

Archive server for FidoNet modelled after Archie for the Internet. It maintains file lists from FidoNet systems throughout its area and will do searches on these file lists based on netmail requests made to it by remote systems.

JVArcServ lets you search through file listings for the program you are looking for. It will send you an email message back telling you the BBS name, phone number, and file section of all the systems in the network that match the given criteria.

KB
--
Kilobyte. A unit of data storage size which represents 1024 characters of information.

Kbits

1,000 bits.

Kermit

Protocol designed for transferring files between microcomputers and mainframe computers developed by Catchings at Columbia University.
    There are both public domain, and copyrighted Kermit programs. Some of these programs are complete programs in themselves offering the communication functions needed for the particular machine on which they are running.
    The complete Kermit protocol manual and the source code for various versions are available from:

     Kermit Distribution, (212) 854-3703
     Columbia University Center for Computing Activities
     612 West 115 Street, New York, NY 10025

Knowbot

Experimental directory services using intelligent computer programs that automate the search and gathering of data from distributed databases. The concept behind the Knowbot is that it is supposed to be a Knowledge Robot -- something that goes hunting for information on the Internet.
    To reach a Knowbot: telnet CNRI.Reston.va.us port 70

LAN

Local Area Network. A data network intended to serve an area of only a few square kilometers or less.

LAP-M

Link Access Procedure for Modems is a CCITT standard for modem modulation and error control. It is the primary basis for the CCITT V.42 protocol.

Library
---
is used on online services about a collection of related databases (that you may search in) or files (that may be retrieved).

List

File-viewing program for MS-DOS computers (see chapter 14). Registration: US$37 to Buerg Software, 139 White Oak Circle, Petaluma, CA 94952, U.S.A. (1993).

LISTSERV

An automated mailing list distribution system enabling online discussions of technical and nontechnical issues conducted by electronic mail throughout the Internet. The LISTSERV program was originally designed for the BITNET/EARN networks.
   Similar lists, often using the Unix readnews or rn facility, are available on the Internet.

LOOKFOR

Fast and flexible shareware program for boolean searches in text files. Registration: US$15 plus postage to David L. Trafton, 6309

Stoneham Rd., Bethesda, Md. 20817, U.S.A.

Lurking

No active participation by a subscriber to a mailing list, a conference, or Usenet newsgroup. A person who is lurking is just listening to the discussion.

MAILBASE

A program functioning like a LISTSERV. For more information about the Mailbase at Newcastle University (England), send email to MAILBASE@MAILBASE.AC.UK containing the following commands:

```
send mailbase overview  (for a general guide to Mailbase)
send mailbase userhelp  (for a User Guide)
lists                   (for a list of available forums)
```

This mailbase managed 403 mailing lists in July 1993.

Mail Gateway

A machine that connects to two or more electronic mail systems (including dissimilar mail systems) and transfers messages among them.

Mailing list

A possibly moderated discussion group on the Internet, distributed via email from a central computer maintaining the list of people involved in the discussion. Anyone can send a message to a single mailing list address. The message is "reflected" to everyone on the list of addresses. The members of that list can respond, and the responses are reflected, forming a discussion group.
(See LISTSERVers)

Mail path

A series of machine names used to direct electronic mail from one user to the other.

Mail server

A software program that distributes files or information in response to requests sent by email.

MHS
---
(1) Message handling Service. Electronic mail software from Action Technologies licensed by Novell for its Netware operating systems. Provides message routing and store and forward capabilities. MHS has gateways into PROFS, and X.400 message systems. It has been augmented with a directory naming service and binary attachments.

(2) Message Handling System. The standard defined by CCITT as X.400 and by ISO as Message-Oriented Text Interchange Standard (MOTIS). MHS is the X.400 family of services and protocols that provides the functions for global email transfer among local mail systems.

MNP

Microcom Networking Protocol. A proprietary standard of error control and data compression.

Modem

An acronym for MOdulator-DEModulator. It is a device that converts digital data from a computer or terminal into analog data that can be sent over telephone lines. On the receiving end, it converts the analog data back to digital data.

Most modern modems can handle the dialing and answering of a telephone call and generate the speed of the data transmission, measured in bits per second, or baud rates. The telephone industry sometimes refers to a modem as a dataset.

Moderator

A person, or a small group of people, who manage moderated mailing lists and newsgroups. Moderators are responsible for deciding which email submissions are passed on to list.

MUD

Multi-User Dungeon. A multi-user, text based, virtual reality game.

NAPLPS

North American Presentation-Level Protocol Syntax. A text and graphics data transmission format for sending large amounts of information between computers.

It was designed for the encoding of alphanumeric, alpha-mosaic, alpha-geometric and alpha-photographic constructs. The standard is resolution independent and device independent, and can easily accommodate international character sets, bit-mapped images in color, animation and sound.

NAPLPS was originally developed for videotext and teletext systems through the Canadian Standards Association (CSA-T500-1983. It was later enhanced by AT&T, and in 1983 became an ANSI standard (ANSI-X3.110-1983).

Some videotext systems, including Prodigy (U.S.A.), are based on NAPLPS. On CompuServe, NAPLPS has been replaced with a newer protocol called GIF, Graphics Interchange Format.

Netfind

Internet directory services that allow users to get information about individuals. Search by name and organization/location. For more information, send email to LISTSERV@brownvm.brown.edu with the following text in the body of your mail "GET NETFIND HELP".

Netiquette

A pun on "etiquette" referring to proper behavior on a network.

Netnews

See: Usenet.

Network

A data communications system which interconnects computer systems

at various sites.

NIC

Network Information Center. An organization that provides users with information about services provided by the Internet network.

NREN

The National Research and Education Network. A proposed computer network to be built in the U.S.A.

NUA

Network User Address. The network address in a packet data network. The electronic number that is sent to the network to connect to an online service. Also, called X.121 address.

NUI

Network User Identification. The user name/password that you use to get access to (and use) a commercial packet switched network.

Offline
----
has the opposite meaning of "Online" (see below). It signifies that your computer is not in direct communication with a remote online service.

Offline Reader

A computer program making the handling of mail and files from online services easier (and cheaper). Some also provides automatic mail and file transfers.

Typically, you first connect to an online service (often a BBS) to capture new mail in a compressed file (typically through a "QMail door program.") Many offline mail reader programs are idle while this goes on, while others can do communications as well.

When disconnected from the service, the offline reader works as a combination message data base and message editor. It gives you the feeling of still being connected to the online service, while actually being completely disconnected.

When you have read and replied to all messages offline, the offline reader creates a compressed "packet" containing any replies entered. Some also let you prepare packets containing commands to join or leave conferences, subscribe to or signoff from special services, and download files.

Then, you dial back to the BBS to upload (send) the packet, either using the offline reader's communications module, or another communications program.

Readers are available for MS-DOS, MS-Windows, Macintosh, Amiga, Atari ST, Unix, and CP/M computers. The programs may be downloaded from many BBSes, and commercial services.

Online

In this book, it signifies the act of being in direct communication with a remote computer's central processing unit.

An online database is a file of information that can be directly accessed by the user.

OSI

Open System Interconnection. A set of protocols designed to be an international standard method for connecting unlike computers and networks.

OZCIS

DOS-based program that automates access to CompuServe using an elaborate array of menus. Free for personal use. Contact: Ozarks West Software, 14150 Gleneagle Drive, Colorado Springs, CO 80921, U.S.A.

Packet

(1) A group of bits sent by a modem that comprise a byte of information.
(2) A group of bytes sent by a file transfer protocol.

Packet data networks

Also called Packet Switching Networks (PDN). Value added networks offering long distance computer communications. They let users access a remote computer, by dialing a local node, or access point.

The packet data networks use high speed digital links, which can be land lines or satellite communications, to transmit data from one computer to another using packets of data. They use synchronous communications, usually with the X.25 protocol. The routes are continually optimized, and successive packets of the same message need not necessarily follow the same path.

Packet switching

Sending data in packets through a network to some remote location. The data to be sent is subdivided into individual packets of data, each having a unique identification and carrying its destination address. This allows each packet to go by a different route. The packet ID lets the data be reassembled in proper sequence.

PC

Personal computer.

PDN

See Packet data networks.

Postmaster

On the Internet, the person responsible for handling electronic mail problems, answering queries about users, and other related work at a site.

Prompt

Several times during interactive dialogs with online services, the flow of data stops while the host computer waits for commands from the user. At this point, the service often presents the user with a reminder, a cue, a prompt. These are some typical prompts:

    ?

```
    !
    WHAT NOW?
    (Read) next letter -
    ulrik 1>
    System News - 5000>
    Enter #, <H>elp, or <CR> to continue?
    Action ==> (Inbox)
    Command:
    Enter command or <RETURN>
    -->
```

Protocol

A formal description of message formats and the rules two computers must follow to exchange messages. Protocols can describe low-level details of machine-to-machine interface (e.g., the order in which bits and bytes are sent across the wire), or high-level exchanges between allocation programs (e.g., the way in which two programs transfer a file across the Internet).

ProYam

Powerful script-driven communications program. US$139 + $5 for postage from Omen Technology Inc., 17505-V NW Sauvie Island Rd, Portland, Oregon 97231, U.S.A. (VISA and Eurocard - 1992)

PSS

British Telecom's Packet Switch Stream, an X.25 packet data network.

PTT

Postal Telegraph and Telephone. A telephone service provider, often a monopoly, in a particular country.

QWK

Qwikmail. A common offline message file format for bulletin boards offering mail through a QMail Door. The .QWK door and file format has been used to develop entire BBS networks (example: ILINK.)
    See "offline reader."

RFC

The Internet's Request for Comments document series. Working notes of the Internet research and development community.

Script files

A set of commands that enable a communications program to execute a given set of tasks automatically (macro commands).

Server

A provider of resources (e.g., file servers and name servers).

SIG

Special Interest Group.

Snail mail

A pejorative term referring to the national postal service in different countries.

String search

A method for searching a database. Works like the search function in a common word processor program.

On online services, your commands will often search the full document (including the title, subtitles, keywords, and the full text). Sometimes, string searches just return a line or a few lines around the hit. In other cases, they return the full screen or the full document.

Sysop

Common name used on bulletin boards for System Operator. This is the person in charge of maintenance and helping users.

System

Generic name for a computer with connected equipment or for an online service or bulletin board.

Talk

A command on the Internet, which may remind of IRC, but is a single link between two parties only.

TAPCIS

A program for automatic access to CompuServe. It lets callers read and respond to personal email and forum message threads offline, and download files. Contact: Support Group, Inc., Lake Technology Park, McHenry, MD 21541, U.S.A. Also: TAPCIS Forum. Internet mail: 74020.10@compuserve.com. On CompuServe: 74020,10. Registration: US$ 79.00.

TCP/IP

Transmission Control Protocol/Internet Protocol. Set of communications protocols that internetwork dissimilar systems connected to the Internet. TCP/IP supports services such as remote login (telnet), file transfer (FTP), and mail (SMTP).

Telnet

A program on the Internet that allows logins to another computer to run software there. Telnet allows a user at one site to interact with a remote system at another site as if the user's terminal was connected directly to the remote computer.

With telnet, you can browse menus, read text files, use gopher services, and search online databases. Sometimes, you can join live, interactive games and chat with other callers. Usually, you cannot download files or list file directories.

Telnet is not available to users who have email only access to the Internet.

To telnet a remote computer, you must know its name. This can either be in words, like "vm1.nodak.edu", or a numeric address, like "134.129.111.1". Some services require that you connect to a

specific "port" on the remote system. Enter the port number, if there is one, after the Internet address.

For a list of SPECIAL INTERNET CONNECTIONS, send email to bbslist@aug3.augsburg.edu. You can also get it by ftp or gopher to csd4.csd.uwm.edu, and through alt.internet.services on Usenet.

Terminal emulator

A program that allows a computer to emulate a terminal. The workstation appears as a given type of terminal to the remote host.

TRICKLE

Servers on the Internet offering the SIMTEL20 shareware and public domain files by email (uuencoded). These servers include:

TRICKLE@TREARN.BITNET	(Turkey)
TRICKLE@BBRNSF11.BITNET	(Belgium)
TRICKLE@TAUNIVM.BITNET	(Israel)
TRICKLE@IMIPOLI.BITNET	(Italy)
TRICKLE@DB0FUB11.BITNET	(Germany)
TRICKLE@AWIWUW11.BITNET	(Austria)
TRICKLE@UNALCOL.BITNET	(Colombia)

For more information and a list of TRICKLE servers, send a message to one of these addresses with the command "/HELP" in the body of your text.

TTY

Abbreviation for TELETYPE, a special type of writing terminal (electrical/mechanical). Also, known as 'dumb terminal'.

TTY mode

This is when a communications program emulates a TTY machine, which only involves printing characters and recognizing the linefeed, carriage return and backspace characters.

Unix

An operating system that supports multi-user and multitasking operations.

Uploading

The act of transferring data from your computer's disk (up) to an online service and storage there.

Usenet

A global bulletin board, of sorts, in which millions of people exchange public information on every conceivable topic. For more information, see appendix 1.

UUCP

See appendix 1.

Veronica

A service on the Internet. Maintains an index of gopher items, and provides keyword searches of those titles. The result of a search is a set of gopher-type data items, which is returned to the user as a gopher menu. The user can access any of these data items by selecting from the returned menu.

WAIS (Wide Area Information Servers)

A kind of indexed online search tool to locate items based on what they contain - usually keyword text searches. It is a powerful tool for concurrent searches of large databases and/or newsgroups on the Internet.

Example: Telnet QUAKE.THINK.COM (or Telnet 192.31.181.1). Login as "wais".

WAN

Wide Area Network.

The 'whatis' database

Archie (see above) also permits access to the whatis description database. It contains the names and brief synopses of over 3,500 public domain software packages, datasets and informational documents located on the Internet.

Whois

An Internet program that lets users query a database of people and other Internet entities, such as domains, networks, and hosts, kept at the NIC (see above).

For example, Whois lets you scan through a registry of researchers in the network field to find an Internet address, if you have only the last name or part of it. It will give you the person's company name, address, phone number, and email address. It had around 70,000 listings in December 1992.

To access the WHOIS, telnet to rs.internic.net. When greeted by the host, type "WHOIS" and press RETURN. It also has a gopher service (type "gopher" go access, instead of "wais").

WWW (World Wide Web)

is much like Gopher in that it provides top level access down to other services on the Internet. WWW uses a hypertext interface with cross links between things. You can use highlighted words to jump off onto another track.

WYSIWYG

What You See is What You Get.

X.25

A CCITT standard communications protocol used internationally in packet data networks. It provides error-checked communication between packet data networks and their users or other networks.

Rather than sending a stream of bits like a modem, an X.25 router sends packets of data. There are different packet sizes and types. Each packet contains data to be transmitted, information about the packet's origin, destination, size, and its place in the order of the packets sent. There are clear packets that perform

the equivalent of hanging-up the phone. There are reset, restart, and diagnostic packets. On the receiving end, the packet assembler/ disassembler (PAD) in the router translates the packets back into a readable format.

X.400

The CCITT and ISO standard for electronic mail.

X.500

The CCITT and ISO standard for electronic directory services.

Appendix 5:

Books, articles, newsletters, etc. for further reading

==========

Internet

"The Matrix: Computer Networks and Conferencing Systems Worldwide," John S. Quarterman, Digital Press, Bedford, MA, 719 pages, 1990. (Internet address: mids@tic.com. Gopher service at gopher.tic.com.)

"Matrix News," a newsletter about cross-network issues. Networks frequently mentioned include USENET, UUCP, FidoNet, BITNET, the Internet, and conferencing systems like the WELL and CompuServe. Matrix News is about all computer networks worldwide that exchange electronic mail.
Online subscription: US$25 for twelve monthly issues, or US$15 for students. Paper subscriptions: US$30 for twelve monthly issues, or US$20 for students; for overseas postage, add US$10 (1992).
Contact: Matrix News, Building 2 Suite 300, 1120 South Capitol of Texas Highway, Austin, TX 78746, U.S.A. Email: mids@tic.com .

"!%@:: A Directory of Electronic Mail Addressing and Networks," by Donnalyn Frey and Rick Adams (O'Reilly & Associates, Inc., 632 Petaluma Avenue, Sebastopol, CA 95472, U.S.A.). 408 pages, US26.95. Write to nuts@ora.com for ordering information.

"The User's Directory of Computer Networks" by Tracy L. LaQuey (Ed.), University of Texas, Digital Press, 12 Crosby Drive, Bedford, MA 01730, U.S.A. 630 pages, 1990.

"Zen and the Art of the Internet: A Beginner's Guide, Second Edition" by Brendan P. Kehoe, Prentice-Hall Series in Innovative Technology, 1993. 112 pages, ISBN 0-13-010778-6, US$22.00.

"The Whole Internet User's Guide and Catalog," by Ed Krol. 1992. Published by O'Reilly and Associates, Inc., 103 Morris Street, Suite A, Sebastopol, CA 95472, U.S.A.. 400 pages, US$24.95. ISBN 1-56592-025-2. Email questions to nuts@ora.com or uunet!ora!nuts .

"A Guide to Electronic Mail Networks and Addressing," by Donnalyn Frey and Rick Adams. 1989. O'Reilly & Associates, Inc., 103 Morris Street, Suite A, Sebastopol, CA 95472, U.S.A. Email address: nuts@ora.com .

"Managing UUCP and the Internet." Published by O'Reilly and Associates, Inc., 103 Morris Street, Suite A, Sebastopol, CA 95472, U.S.A. Email address: nuts@ora.com .

"The Internet Companion: A Beginner's Guide to Global Networking" by Tracy LaQuey, with Jeanne C. Ryer. Addison-Wesley, 1992, $10.95, p. 196, ISBN 0-201-62224-6. Order direct from Addison-Wesley Publishing Co., Inc., 1 Jacob Way, Reading, MA 01867, U.S.A.

"Internet: Getting Started," April Marine, ed., SRI International, Menlo Park, CA, May 1992. ISBN: none, US$39.

"The New User's Guide to the Internet" by Daniel P. Dern, McGraw-Hill, New York, USA. 1993. ISBN 0-07-016510-6 (hc). ISBN 0-07-16511-4 (pbk).

"An Internet Primer for Information Professionals: A Basic Guide to Networking Technology," by Elizabeth S. Lane, and Craig A. Summerhil, p. 200, Meckler Corp., Westport, CT, USA. US$37.50. ISBN 0-88736-831-X.

"Crossing the Internet Threshold," by Roy Tennant, John Ober, and Anne G. Lipow, p. 134, Library Solutions Press, 1100 Industrial Rd., Suite 9, San Carlos, CA 94070, U.S.A. 1993. ISBN: 1-882208-01-3 . US$45.00 plus shipping and handling.

"The Internet Passport: NorthWestNet's Guide to Our World Online" by Kochmer, Jonathan and NorthWestNet. 4th ed. 515p. Bellevue, WA, USA: NorthWestNet, 1993. ISBN: 0-9635281-0-6. Price: US$39.95. (US$19.95 nonprofit and educational). Fax: +1-206-562-4822.

"Internet: Mailing Lists 1993 Edition." Franklin F. Kuo, SRI Internet Information Services. Published by PTR Prentice Hall, New Jersey, USA. ISBN: 0-13-327941-3. Paperback, 356 pages.

"Internet Connections: A Librarian's Guide to Dial-Up Access and Use" by Mary E. Engle, Marilyn Lutz, William W. Jones, Jr., and Genevieve Engel. Library and Information Technology Association's Monographs Series, #3, 1993. 166 pages. ISBN 0-8389-7677-0.

"Internet World magazine", Meckler Corporation, 11 Ferry Lane West, Westport, CT 06880, U.S.A. (meckler@jvnc.net)

"The Internet Business Journal," 1-60 Springfield Road, Ottawa, CANADA, K1M 1C7. Fax: +1-613-564-6641. Publisher: Michael Strangelove <72302.3062@compuserve.com>.

"Netpower: Resource Guide to Online Computer Networks," by Eric Persson, Fox Chapel Publishing, Box 7948, Lancaster, PA 17604-7948, U.S.A. US$ 39.95. 1993. 800+ pages. Email: NetPower1@aol.com .

"Information Highways." Magazine. Annual subscription: $98.00CDN. Information Highways, 162 Joicey Blvd., Toronto, Ontario, M5M 2V2, Canada. Fax: +1-416-488-7078.

Bulletin Board systems and networks

BoardWatch Magazine, 7586 Weat Jewell Ave., Suite 200, Lakewood, CO 80232, U.S.A. Email: jrickard@boardwatch.com .

CompuServe

"CompuServe from A to Z," by Charles Bowen, Bantam Computer Books, 1991. US$24.95. Paperback, 520 pages.

GEnie

"Glossbrenner's Master Guide to GEnie," Alfred Glossbrenner, Osborne/McGraw-Hill, 1991, US$39.95, paperback, 616 pages.

Various

"EcoLinking: Everyone's Guide to Online Environmental Information," by Don Rittner. Peachpit Press, 1992, US$18.95, paperback, 352 pages, appendices, index.

"Online Information Hunting," by Nahum Goldman, TAB Books, Inc., 1992, US$19.95, paperback, 236 pages.

"SysLaw: The Legal Guide for Online Service Providers" by Lance Rose, Esq., and Jonathan Wallace, Esq. Sold by PC Information Group, 1126 East Broadway, Winona, MN 55987, U.S.A. US$34.95 plus $3.00 shipping.

"The Information Broker's Handbook," by Sue Rugge and Alfred Glossbrenner, Windcrest/McGraw-Hill.

"Dvorak's Guide to PC Telecommunications," John Dvorak and Nick Anis (1992, 1128 pages, US$39.95). Second edition.

Articles

The following articles are available by email from LISTSERV@UHUPVM1 (BITNET) or LISTSERV@UHUPVM1.UH.EDU (Internet). In the TEXT of your message, write the GET command shown after the article's citation below:

Bailey, Charles W., Jr. "Electronic Publishing on Networks: A Selective Bibliography of Recent Works." The Public-Access Computer Systems Review 3, no. 2 (1992): 13-20. GET BAILEY PRV3N2 F=MAIL.

Harnad, Stevan. "Post-Gutenberg Galaxy: The Fourth Revolution in the Means of Production of Knowledge." The Public-Access Computer Systems Review 2, no. 1 (1991): 39-53. GET HARNAD PRV2N1 F=MAIL.

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Arms, Caroline R. Review of Library Resources on the Internet: Strategies for Selection and Use, by Laine Farley, ed. In The Public-Access Computer Systems Review 3, no. 2 (1992): 29-34. GET ARMS PRV3N2 F=MAIL.

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Cook, Dave. Review of The User's Directory of Computer Networks, by Tracy L. LaQuey, ed. In The Public-Access Computer Systems Review 2, no. 1 (1991): 177-181. GET COOK PRV2N1 F=MAIL.

Appendix 6:

International Standard Top-level Country codes

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Top-level country codes derived from the International Standards Organization's international standard ISO 3166, except United Kingdom that should be called Great Britain (GB) instead of UK.

Domain	Country	Comments
AD	Andorra	
AE	United Arab Emirates	
AF	Afghanistan	
AG	Antigua and Barbuda	
AI	Anguilla	
AL	Albania	
AM	Armenia	Ex-USSR
AN	Netherland Antilles	
AO	Angola	
AQ	Antarctica	
AR	Argentina	
AS	American Samoa	
AT	Austria	
AU	Australia	
AW	Aruba	
AZ	Azerbaidjan	Ex-USSR
BA	Bosnia-Herzegovina	Ex-Yugoslavia
BB	Barbados	
BD	Bangladesh	
BE	Belgium	
BF	Burkina Faso	
BG	Bulgaria	
BH	Bahrain	
BI	Burundi	
BJ	Benin	
BM	Bermuda	
BN	Brunei Darussalam	
BO	Bolivia	
BR	Brazil	
BS	Bahamas	
BT	Buthan	
BV	Bouvet Island	
BW	Botswana	
BY	Bielorussia	Ex-USSR
BZ	Belize	
CA	Canada	
CC	Cocos (Keeling) Isl.	
CF	Central African Rep.	

CG	Congo	
CH	Switzerland	
CI	Ivory Coast	
CK	Cook Islands	
CL	Chile	
CM	Cameroon	
CN	China	
CO	Colombia	
CR	Costa Rica	
CS	Czechoslovakia	
CU	Cuba	
CV	Cape Verde	
CX	Christmas Island	
CY	Cyprus	
DE	Germany	
DJ	Djibouti	
DK	Denmark	
DM	Dominica	
DO	Dominican Republic	
DZ	Algeria	
EC	Ecuador	
EE	Estonia	Ex-USSR also via .su domain
EG	Egypt	
EH	Western Sahara	
ES	Spain	
ET	Ethiopia	
FI	Finland	
FJ	Fiji	
FK	Falkland Isl.(Malvinas)	
FM	Micronesia	
FO	Faroe Islands	
FR	France	
FX	France (European Ter.)	???
GA	Gabon	
GB	Great Britain (UK)	X.400 address gateway
GD	Grenada	
GE	Georgia	Ex-USSR
GH	Ghana	
GI	Gibraltar	
GL	Greenland	
GP	Guadeloupe (Fr.)	
GQ	Equatorial Guinea	
GF	Guyana (Fr.)	
GM	Gambia	
GN	Guinea	
GR	Greece	
GT	Guatemala	
GU	Guam (US)	
GW	Guinea Bissau	
GY	Guyana	
HK	Hong Kong	
HM	Heard & McDonald Isl.	
HN	Honduras	
HR	Croatia	Ex-Yugoslavia via .yu
HT	Haiti	
HU	Hungary	
ID	Indonesia	
IE	Ireland	
IL	Israel	
IN	India	
IO	British Indian O. Terr.	

IQ	Iraq	
IR	Iran	
IS	Iceland	
IT	Italy	
JM	Jamaica	
JO	Jordan	
JP	Japan	
KE	Kenya	
KG	Kirgistan	Ex-USSR
KH	Cambodia	
KI	Kiribati	
KM	Comoros	
KN	St.Kitts Nevis Anguilla	
KP	Korea (North)	
KR	Korea (South)	
KW	Kuwait	
KY	Cayman Islands	
KZ	Kazachstan	Ex-USSR
LA	Laos	
LB	Lebanon	
LC	Saint Lucia	
LI	Liechtenstein	
LK	Sri Lanka	
LR	Liberia	
LS	Lesotho	
LT	Lithuania	Ex-USSR
LU	Luxembourg	
LV	Latvia	Ex-USSR
LY	Libya	
MA	Morocco	
MC	Monaco	
MD	Moldavia	Ex-USSR
MG	Madagascar	
MH	Marshall Islands	
ML	Mali	
MM	Myanmar	
MN	Mongolia	
MO	Macau	
MP	Northern Mariana Isl.	
MQ	Martinique (Fr.)	
MR	Mauritania	
MS	Montserrat	
MT	Malta	
MU	Mauritius	
MV	Maldives	
MW	Malawi	
MX	Mexico	
MY	Malaysia	
MZ	Mozambique	
NA	Namibia	
NC	New Caledonia (Fr.)	
NE	Niger	
NF	Norfolk Island	
NG	Nigeria	
NI	Nicaragua	
NL	Netherlands	
NO	Norway	
NP	Nepal	
NR	Nauru	
NT	Neutral Zone	
NU	Niue	

NZ	New Zealand	
OM	Oman	
PA	Panama	
PE	Peru	
PF	Polynesia (Fr.)	
PG	Papua New Guinea	
PH	Philippines	
PK	Pakistan	
PL	Poland	
PM	St. Pierre & Miquelon	
PN	Pitcairn	
PT	Portugal	
PR	Puerto Rico (US)	
PW	Palau	
PY	Paraguay	
QA	Qatar	
RE	Reunion (Fr.)	In .fr domain
RO	Romania	
RU	Russian Federation	Ex-USSR
RW	Rwanda	
SA	Saudi Arabia	
SB	Solomon Islands	
SC	Seychelles	
SD	Sudan	
SE	Sweden	
SG	Singapore	
SH	St. Helena	
SI	Slovenia	Ex-Yugoslavia also via .yu
SJ	Svalbard & Jan Mayen Is	
SL	Sierra Leone	
SM	San Marino	
SN	Senegal	
SO	Somalia	
SR	Suriname	
ST	St. Tome and Principe	
SU	Soviet Union	Still used.
SV	El Salvador	
SY	Syria	
SZ	Swaziland	
TC	Turks & Caicos Islands	
TD	Chad	
TF	French Southern Terr.	
TG	Togo	
TH	Thailand	
TJ	Tadjikistan	Ex-USSR
TK	Tokelau	
TM	Turkmenistan	Ex-USSR
TN	Tunisia	
TO	Tonga	
TP	East Timor	
TR	Turkey	
TT	Trinidad & Tobago	
TV	Tuvalu	
TW	Taiwan	
TZ	Tanzania	
UA	Ukraine	Ex-USSR via .su domain
UG	Uganda	
UK	United Kingdom	ISO 3166 code is GB
UM	US Minor outlying Isl.	
US	United States	
UY	Uruguay	

UZ	Uzbekistan	Ex-USSR
VA	Vatican City State	
VC	St.Vincent & Grenadines	
VE	Venezuela	
VG	Virgin Islands (British)	
VI	Virgin Islands (US)	
VN	Vietnam	
VU	Vanuatu	
WF	Wallis & Futuna Islands	
WS	Samoa	
YE	Yemen	
YU	Yugoslavia	
ZA	South Africa	
ZM	Zambia	
ZR	Zaire	
ZW	Zimbabwe	

Some other top level codes being used:

ARPA	Old style Arpanet	
COM	Commercial	
EDU	Educational	
GOV	Government	
INT	International field	used by Nato
MIL	US Military	
NATO	Nato field	being replaced by .int
NET	Network	
ORG	Non-Profit Organization	

The codes (domains) in this section are special in that some of them are used in more than one country.

Appendix 7:

About the author

==========

Odd de Presno (born 1944) lives in Arendal, a small town in Norway, with his computers and modems. He has written twelve books. Half these focus on various aspects of the Online World. The rest is about practical applications of MS-DOS based personal computers. Published in Norway and England. His book "The Online World" is distributed globally as shareware.

Over 700 of his articles have been published in management and technical magazines in Scandinavia, England, Japan, and the U.S.

Writer. International public speaker. Consultant. Operates an English-language bulletin board system in Norway (since 1985).

Area of special expertise: applications of global sources of online information, computer conferencing, global electronic mail, automation of information retrieval, MS-DOS computer applications.

Founder and Project Director of KIDLINK, an international non-profit organization promoting a global dialog among the youth of the world. Since its start in 1990, KIDLINK has involved over ten thousand kids in the 10 - 15 years range in over 50 countries.

Educational background includes a Diploma Degree in Business

Administration from Bedriftsoekonomisk Institutt (Norway).
He founded the software company Data Logic A/S (Norway) in 1967 and was president for five years. Sales manager Control Data Corp. seven years (in charge of CYBERNET/Norway, an international online service). Marketing manager IKO Software Service A/S, two years. Currently running his own business.
Member of the Computer Press Association (U.S.A.) since 1983, and NFF (Norway). Listed in Marquis' "Who's Who in the World" from 1991.

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